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TYPES AND DIMENSIONS OF WILDERNESS SOLITUDE

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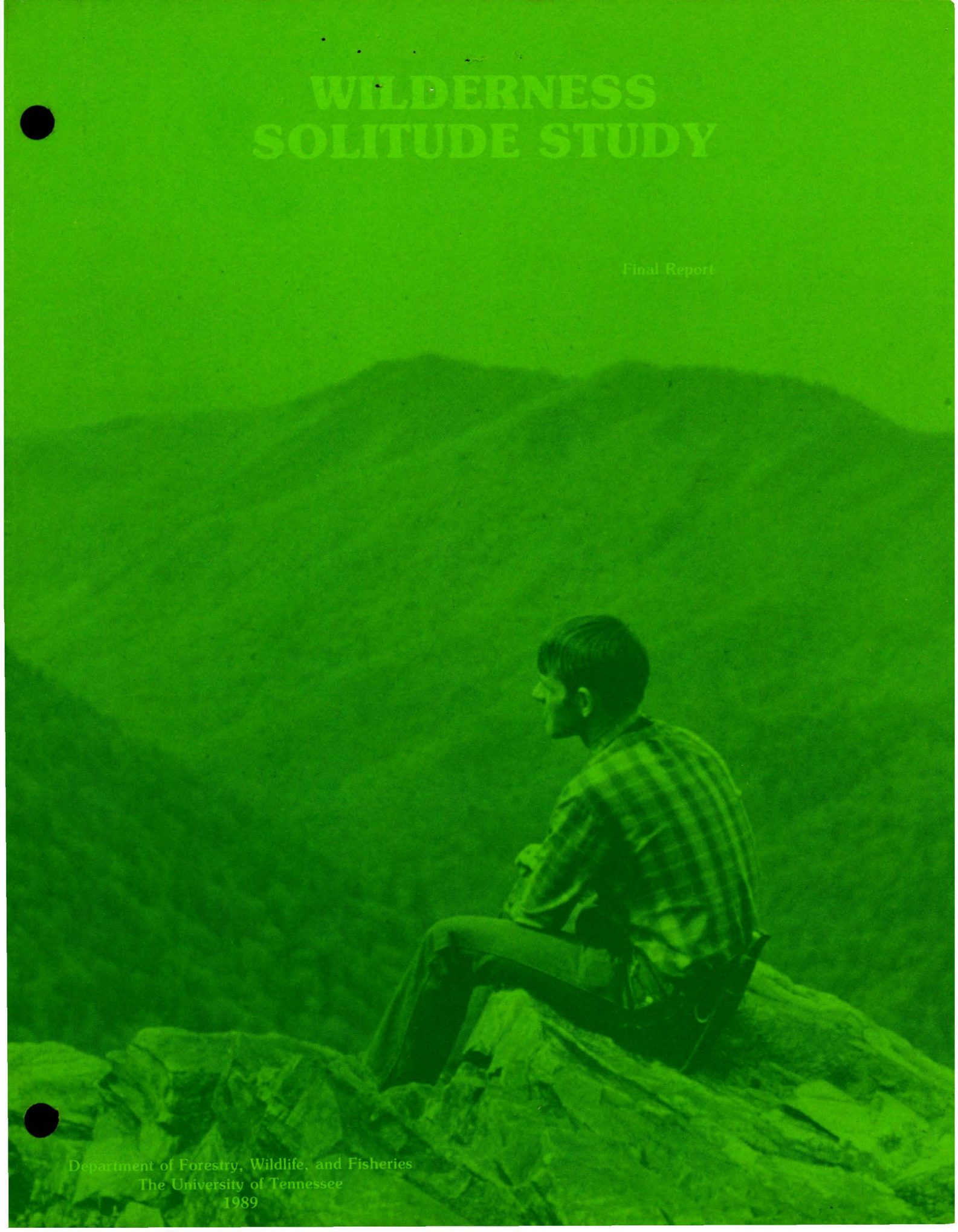
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WILDERNESS SOLITUDE STUDY

Final Report



Department of Forestry, Wildlife, and Fisheries
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1989

TYPES AND DIMENSIONS OF WILDERNESS SOLITUDE

Title

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EXECUTIVE SUMMARY

Solitude has been identified as a major attribute of the wilderness experience, yet there is little understanding of what this concept actually means to wilderness users. In 1981 and 1982, Hammitt and colleagues began to address this issue by developing a psychological scale for exploring the meaning of wilderness privacy/solitude. However, this scale was never field tested in a backcountry-wilderness area. The purposes of this study were to further refine the concept of wilderness privacy/solitude, to refine the wilderness privacy scale, and to field test the scale among backcountry users.

Two hundred fifty-two Great Smoky Mountain National Park (GSMNP) backcountry backpackers were contacted from June through September in 1987. These recreationists were later mailed a 9-page questionnaire. The questionnaire contained variables concerning trip characteristics, user characteristics, user encounters, coping behaviors, and a 20-item wilderness privacy scale. After three follow-up reminders, the usable response rate was 73%.

Study participants averaged 33 years of age, were predominantly male, and had an average education level of 15.6 years. The majority (70%) were also professionals or students. Most lived in urban areas and 65% of the respondents lived in the states of Tennessee, Florida, North Carolina, and Georgia.

Most (95%) backpackers responding to the survey usually hike in parties of two or more individuals. Few individuals (13%) backpack as members of organized clubs. Friends are the most common companions. Average length of stay was 3.2 days and the average distance traveled was 24 miles.

Backpackers most frequently hiked in the summer (June-August) and most (67%) began trips on the weekend (Friday-Sunday).

The developmental (privacy scale development in 1981-82) and field (field testing in GSMNP) studies produced similar importance ratings for the 20-individual privacy items. In both studies, the most important elements of wilderness privacy were: a remote environment that is free from man-made noises and intrusions; freedom of choice in terms of one's actions and use of time; and control over everyday pressures, tensions, and attention load. The least important elements were: freedom from the observation of others, an isolated experience, an anonymous identity, and freedom from daily bodily maintenance. Some differences between the studies were observed. Laboratory respondents rated intimacy items as being more important than did field respondents. To a lesser degree, field respondents rated natural, noise-free aspects of the environment more important, while laboratory respondents found cognitive and societal freedom aspects more important.

A factor analysis of the field tested privacy items produced six privacy dimensions. Arranged in order of decreasing importance these were Natural Environment, Individual Cognitive Freedom, Social Cognitive Freedom, Intimacy, Isolation, and Individualism. This differs from the developmental study which produced only four dimensions. The laboratory respondents produced only one dimension concerning Cognitive Freedom. The Isolation dimension was a completely new factor in the field test.

The following description of the privacy dimensions is based on the field study. The Natural Environment dimension refers to a remote, completely natural environment free from man-made noises and intrusions. Individual Cognitive Freedom items include freedom to limit attention,

freedom of choice as to actions and use of time, control over pressures of every day life, and a small, intimate group which permits isolation when desired. Social Cognitive Freedom refers to freedom to chose the extent to which one interacts with others, freedom to control ones thoughts, and freedom from the expectations of others. Intimacy refers to the ability to limit ones attention to a few people, privacy from most people, yet a personal relationship to family and friends, and the ability to associate with a chosen group without being interrupted. Isolation includes a small, intimate group experience, isolated from all others, and an isolated experience by oneself. Individualism referred to freedom from observation by others, freedom from daily bodily maintenance, anonymity, and freedom from the rules and constraints of society.

Grouping backpackers by past-experience level did not provide much additional insight toward analyzing the importance of the wilderness privacy dimensions. The ranking of the six privacy dimensions were the same for all experience categories. Within individual privacy dimensions, the data suggest a possible relationship between importance rating and experience level. Experienced backpackers tended to rate the privacy dimensions as being more important than less experienced backpackers. This issue needs to be examined further, possibly by refining the techniques used to define experience level.

In many cases, the respondents encountered more parties than they felt was acceptable if solitude was to remain at satisfactory levels. However, these same individuals often indicated that the actual number of encounters did not detract from the experience. This finding is consistent with the conclusion that wilderness privacy/solitude means more than a lack of

visual encounters and that other dimensions of the experience are more important than encounter-isolation. Those individuals who did meet more than the acceptable number of parties and who stated that the number of encounters detracted from the experience rated the Isolation dimension of wilderness privacy more highly important than others. This indicates that the wilderness privacy scale can help managers identify appropriate evaluative standards for different subgroups of wilderness users.

Respondents did not frequently employ social coping strategies to reduce interaction with other parties. Physical coping behaviors were used more frequently than social strategies and appeared to be the primary means of avoidance. Physical coping behaviors also were more strongly related to the importance of wilderness privacy dimensions than were social behaviors. The more importantly respondents rated the privacy dimensions, the more likely there were to engage in physical coping behaviors on a regular basis. Thus, coping behaviors were employed by those wilderness backpackers who seemed to have the greatest need to prevent interference with the goal of wilderness privacy.

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CHAPTER I

INTRODUCTION TO PRIVACY/SOLITUDE

Solitude is a major attribute of wilderness experiences and a legally required, distinguishing characteristic of wilderness. The Wilderness Act of 1964 (Public Law 88-577) documents "solitude and naturalness" as important characteristics distinguishing wilderness from other kinds of outdoor recreation. Although solitude is accepted as an important component of wilderness, there is at the same time little understanding of what people actually mean by the concept. Many anti-wilderness advocates interpret solitude as meaning individual isolation and therefore belittle the concept of wilderness solitude, since it is usually characterized by small social groups and light concentrations of users. Many wilderness users, on the other hand, support the idea that solitude benefits may be obtainable under various use densities, depending on the expectations of different wilderness users. Even the National Wilderness Preservation System offers a wide range of classified wilderness areas with densities of use ranging from sparsely used wilderness in Alaska and the intermountain west to some densely used areas in the eastern United States. Can solitude benefits be obtained under such a wide range of conditions? If so, what characterizes solitude?

Some Definitions of Wilderness Solitude

Solitude is often popularly defined as the complete isolation or escape from all other people. However, observations of wilderness users indicate that they mean something different than complete isolation when they refer to wilderness solitude. Many users seek solitude and privacy in the wilderness experience, but studies indicate wilderness experiences are

quite social. Most wilderness use, like other outdoor recreation use, takes place in small "social groups" (Hendee et al., 1968; Stankey, 1973). It is "being alone together" with members of one's group that is important in the wilderness experience. Hendee et al. (1977) found that fishermen using high-mountain wilderness lakes showed an affinity for companions of their own party and an obvious aversion to members of other parties. The aversion for social contacts outside one's party was demonstrated by the distance maintained between parties and the lack of conversation between groups. Both actions demonstrate privacy-maintaining behaviors that systematically minimize contact with people of other parties.

While "being alone together" is an important aspect of the wilderness experience, there is some indication that many wilderness users can be fairly social in their behavior toward other parties when on the trail or in camp. Lee (1977:14) found that "social interactions with other wilderness users (strangers) was unrelated to visitors' interpretations of success in achieving a desired degree of privacy."

A different concept of wilderness solitude is provided by Stankey and Baden (1977). They report that numerous studies (ORRRC, 1962; Hendee et al., 1968; Stankey, 1973) of wilderness users indicate that one of the principal values derived from wilderness is escape - an opportunity for temporary release from the rules and pressures of everyday life. Solitude in this situation refers to escape and isolation from certain social structures and environments, rather than isolation from individual people. As stated by Stankey and Baden, freedom of choice and spontaneity of action appear to be key characteristics of what is commonly called "the wilderness experience."

Freedom of Choice, Privacy, and Solitude

The psychological concept "freedom of choice" can greatly expand our understanding of the relationship between privacy and solitude. Freedom of choice is listed by Cantril (1966) as a major psychological need of humans, and is considered by Proshansky et al. (1976) as the major unifying theme under which solitude, privacy, and crowding are only associate elements. One of the overall objectives in seeking the wilderness experience may be to obtain freedom of choice, both in terms of the information people must process and the behavior demanded of them by others.

In an attempt to satisfy any psychological need, people are usually involved in interactions and exchanges with their environment - both physical and social. Therefore, in order to satisfy the need for freedom of choice, humans seek control over their environment in an attempt to maximize their freedom of choice. One of the major ways people seek control over their social environment is through privacy.

Westin (1967) states that "few values so fundamental to society as privacy have been left so undefined in social theory or have been the subject of such vague and confused writing by social scientists" (Westin, 1967). Yet, privacy remains a vital basic need of humans, and its presence can be found in most environments (Klopfer and Rubenstein, 1977). It serves as a mechanism for controlling the environmental situation in which one must function. Privacy is not an end in itself, but is basically an instrument for achieving a desired environmental state and the individual goal of freedom of choice (Proshansky et al. 1976).

Westin (1967) defines privacy as "the claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others, and from others to them. It is a means by which people adjust information processing mechanisms to

the barrage of personal and social stimuli that they encounter in daily life. Privacy is not a permanent state of being, but a voluntary and temporary withdrawal of a person from the general society through physical or psychological means, either in a state of solitude or small-group intimacy or, when among larger groups, in a condition of anonymity or reserve (Westin, 1967).

According to Altman (1975), privacy is an "interpersonal boundary-control process" that regulates social interaction with others to provide a person with a desired level of privacy. Privacy is "an optimizing process" that aims at an optimal amount of contacts with others; too much or too little interaction is unsatisfactory. Altman suggests that various techniques are commonly used to achieve the desired level of privacy, including verbal or paraverbal behavior, personal space, territory, and cultural mechanisms. Privacy, therefore, serves to increase freedom of choice, since it gives humans control over the types of information they must process. Of course, freedom from interacting with others is a component of freedom of choice and information processing.

Not only does privacy serve the need for freedom of choice, but also various states of privacy provide for the need. Westin's analysis of privacy revealed four basic types:

Solitude- complete isolation, the individual is separated from the group and freed from the observation of others.

Intimacy- the individual is acting as part of a small unit, seeking to achieve a close, personal relationship between two or more select members.

Anonymity- the individual is in a public setting but still seeks and

achieves freedom from identification, surveillance, and social roles.

Reserve - the individual keeps a "mental distance," creates a psychological barrier against unwanted intrusion, and reserves the right not to reveal certain aspects about oneself.

These four types of privacy, then, function to increase personal autonomy, emotional release, self-evaluation, and limited and protected communication. The need for privacy is seen as a need to maximize freedom of choice, to remove constraints and limitations on behavior that are imposed constantly by our urban society (Milgram, 1970).

This broader understanding of privacy encourages us to look beyond the concept of "complete isolation" when considering "wilderness solitude." Privacy, in its many forms, and freedom of choice are what the wilderness user may really be seeking when referring to solitude. The term "solitude" has become a stereotyped response associated with wilderness environments. By solitude, wilderness users may mean privacy in terms of withdrawing from social environments in which they have little control over whom and to what extent they must interact and communicate. They do not seek complete withdrawal from interacting with others (complete isolation) but rather freedom of choice in selecting with whom, when, and to what extent they must interact. The solitude they seek is withdrawal from complex social environments, not complete withdrawal from people. Individuals can participate with a small group of intimate friends whose behavior is quite predictable, and interact with strangers in ways that place no demands on them without feeling a loss of freedom of choice over the information they must process.

Need For Wilderness Privacy Research

Few of the multidimensional aspects of privacy just discussed, and certainly not Westin's specific dimensions of privacy, have been researched in wilderness environments. In 1981 and 1982, Hammitt conducted two laboratory experiments with college students to operationalize some of Westin's privacy dimensions into a "wilderness privacy scale." However, the scale was never field tested among backpackers in a remote natural environment.

Problem Statement

The purpose of this research is to further refine the concept of wilderness privacy/solitude, to refine the wilderness privacy scale, and to field test the scale among backcountry users. It is not known if the laboratory developed wilderness privacy scale will hold-up in the field and how other wilderness use variables are related to the multidimensional concept of wilderness privacy/solitude and its management in wildland areas.

Objectives

1. To identify the major types (dimensions) of privacy/solitude operating in backcountry recreation areas through the survey of on-site backpackers;
2. To determine the level of past experience of users and its relationship to the dimensions of wilderness privacy;
3. To analyze the number and types of visitors encountered by users and the relationship of visitor encounters to wilderness privacy;
4. To determine various types of coping behaviors used by backcountry campers to avoid visitor contacts, and how the coping behaviors relate to the privacy dimensions;

Study Approach

In order to address the objectives set forth in this study, backcountry visitors to the Great Smoky Mountains National Park were surveyed from July to September, 1987. Only backpackers who were staying at least one night in the backcountry were included in the survey. The overwhelming majority of the visitors were sampled at backcountry shelters, while the remainder were contacted along the trail or at a designated backcountry campsite. A contact card and mailed questionnaire were utilized.

CHAPTER II

METHODOLOGY

Study Area

The Great Smoky Mountains National Park, approximately 500,000 acres, straddles the Tennessee-North Carolina border for 69 miles through some of the most scenic, mountainous country in the Eastern United States (Figure 1). Elevations, and therefore climate, differ so greatly within the park that one can take a short drive from the Eastern deciduous forest at the park's boundary to the Northern spruce-fir forest at the park's highest elevation, Clingman's Dome. The change one experiences is similar to being able to drive from Tennessee to Canada within a hour's time. The extreme variations in climate and elevation also account for the parks's multivarious flora and fauna.

The park is still largely undeveloped, and while the Great Smokies is not currently a wilderness area (congressional designation pending), approximately 90 percent of the park is managed as backcountry areas. The most heavily used trail in the nation, the Appalachian Trail, enters the park's southwest corner at Fontana Lake and traces the major ridges until Davenport Gap, where it exits at the park's northeast border (Figure 2). Throughout the Great Smokies, along the A.T. and other trails, the park maintains many designated camping areas. These camping areas consist mainly of two types. The first type, small unimproved clearings, appeal to backpackers who prefer tent camping or other more primitive accommodations. These clearings have a capacity from 6 to 20 people. The other backcountry areas provided by the park are shelters made of wood and local rocks. These shelters usually offer room for 12 campers, however some hold as few as 10 and others can accommodate 14 people. The shelters have wire mesh bunks,

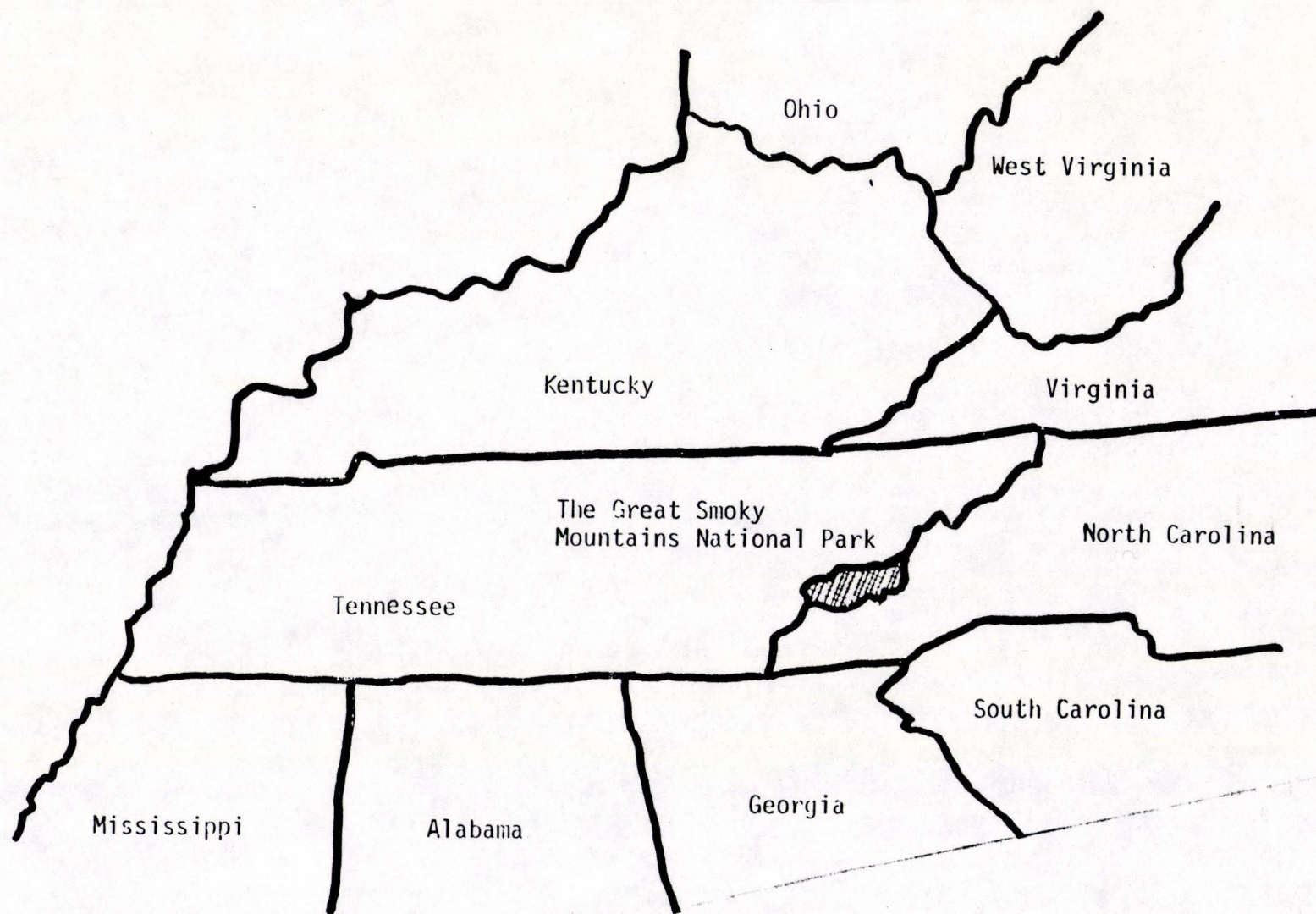


Figure 1. Geographical location of the Great Smoky Mountains National Park, located on the boundary of the states of Tennessee and North Carolina.

fireplaces, and nearby springs. Also, a fence covers the front of the three sided shelters providing protection from black bears who sometimes associate shelters with human food sources. Most shelters are situated at strategic points along the Appalachian Trail in order to minimize environmental impacts. By concentrating shelters and intensive use at particular points, the park is able to sacrifice a very small area in order to keep impact along the trail to a minimum. This management goal is also the motive for backcountry permits, which are required at all times for all backcountry overnights, whether they are tent camping or using shelters.

Study Site

The Great Smoky Mountains National Park was chosen as the study area because it receives a large amount of overnight backcountry use, particularly along the Appalachian Trail. Reasons for this are numerous, but perhaps the greatest contributing factor is the fact that the park is in a central location for many large eastern population centers.

The park provides approximately 82 undeveloped campsites and 18 shelters for backcountry users. The majority of the shelters are situated on or very near the Appalachian Trail. Because of sampling restraints, we were forced to sample heavily in the shelters along the Appalachian Trail. Twelve of the 13 A.T. shelters were sampled, as well as 3 non-A.T. shelters. Also, some backcountry campsites, both A.T. and non-A.T., were surveyed, but these accounted for a very small percentage of the total sample.

Development Of The Survey Instruments

An on-site contact card and mail-questionnaire procedure was used for data collection. The combination of a contact card and mail-questionnaire was thought to be the best method to gain a considerable amount of data

without disturbing the backpacker's experience. The contact card was one-half page, consisting of six questions and a space for the respondents name and address (Appendix A).

The mail-questionnaire for sampling respondents was an outgrowth of instruments developed by Dr. W.E. Hammitt in the early 1980's (Hammitt, 1982). However, the questionnaire devised for this study asked a great deal more information about the respondent. The rough draft of the questionnaire was reviewed by Dr. Bob Lucas of the U.S. Forest Service, Dr. Richard Schreyer of Utah State University, Dr. Cheryl Travis of the University of Tennessee, Dr. John Peine of the Upland Research Lab in the Great Smokies, and others. The final questionnaire was 9 pages long, measured 7 in. x 10 in., and had a color-cover (Appendix B). The cover was green and showed a man sitting alone on a rock looking into one of the valleys in the Great Smoky Mountains.

The nine pages of questions were arranged into six sections, based on the following context areas:

- I. Trip Characteristics-- measured general trip characteristics to determine number in backpacking party, type of party, length of trips, preferred season of use, preference of weekend or weekday trips, and how far the respondent usually hikes before setting up camp for the first night.
- II. Backpacking Experience -- was divided into general backpacking experience and backpacking experience in the Great Smoky Mountains National Park. General backpacking experience questions were concerned with whether or not the trip during which the respondent was contacted was his/her first backpacking trip, number of years of general backpacking experience for respondents, the average number of backpacking trips per year, and the seasonal distribution of those trips. The section that measured backpacking experience in the Great Smokies contained questions parallel to the ones above. In addition, the respondent was asked to rate the relative importance of backpacking as an activity offered by the park and whether or not the respondent was the group leader of the trip during which she or he was contacted.

- III. Visitor Encounters -- concentrated on visitor recall of encounters in general and at specific trail and campsites. Also, the respondents were asked about their expectations about encounters. In addition, the person was asked to rate how characteristics of encounters, such as size of party and number of parties, affected his/her experience. Individuals were asked about their ideal level of encounters through questions which measured the ideal number and size of parties encountered and the maximum number and size of parties which could be encountered before solitude reached unsatisfactory levels.
- IV. Coping Behaviors -- investigated the respondent's methods of coping with different aspects of encounters as well as behaviors to avoid encounters. This section employed a five point Likert scale which allowed the backcountry respondent to indicate the frequency of use of various coping behaviors.
- V. Importance of Solitude -- employed a seven point Likert scale to measure the importance respondents placed on types of wilderness privacy. This section was designed with specific questions to measure each of the four factors of privacy as Hammitt defined them in his 1981 study and to serve as a field test of the earlier work conducted in the classroom.
- VI. Visitor Information -- provided general demographic information on the respondents including age, gender, highest level of education obtained, type of occupation, size of area in which the respondent now lives, and total household income.

Sampling Procedure for Selection of Respondents

Backpackers were contacted at the backcountry site, usually a shelter, and asked to fill out the short contact card. A very small part of the sample was collected along the trail when groups were hiking from site to site. However, individuals contacted along the trail were only allowed to complete a contact card if they had spent at least one night in a Great Smokies backcountry campsite on that particular trip. By contacting users at the site and screening users met on the trail, we were able to insure all those who completed contact cards had spent at least one night in the backcountry. The backcountry users seemed very receptive to the idea of filling out the contact cards. The lone refusal was not uncooperative, he

simply had no mailing address.

Because of the tremendous amount of footwork involved in obtaining a meaningful sample size for this type of study, three researchers were used. Each researcher made his own camping itinerary after consulting with the backcountry permit clerk at Sugarlands Visitor Center. In this way the researchers were able to avoid shelters with a low number of reservations for a particular night. The researchers frequently consulted one another to insure that they would not be in the same area of the park on the same day. With few exceptions, the researchers remained in the park for five days of each week (Thursday-Monday) from June to September, 1987.

Mail-Questionnaire Sample

Shortly after completing the contact cards, all contacted individuals were mailed a questionnaire packet. Included in this packet were a questionnaire, cover letter, and postage paid return envelope. These packets were followed up with an initial postcard reminder in about 8-days. Within another 8-10 days, a second wave of questionnaire packets were mailed to the remaining non-respondents. Finally, a third postcard reminder was sent. Of the original sample size of 252 people, seventy-nine percent (199 people) ultimately responded. Some questionnaires were not usable because the respondent was under sixteen years of age, the questionnaire was not completed correctly, or other reasons. The resulting usable rate of return was seventy-three percent (73%).

Data Analysis

Statistical analysis was done at the University of Tennessee using the Statistical Analysis System (SAS) and the Statistical Package for Social Sciences (SPSSX). Descriptive statistics were obtained by using SAS's univariate and frequency functions. Also, analysis of variance and the

general linear model (GLM) procedures were used to determine significant differences between and among variables. Factor analysis, (SPSSX), involving principal factoring with iteration and orthogonal varimax rotation (Nie et al., 1975), was used to determine common dimensions of solitude among the scale items. Factor loadings had to be ≥ 0.40 for items to be included in a factor, and only factors with eigenvalues ≥ 1.0 were extracted. Also, the internal consistency reliability (Cronbach's alpha) of factors had to be ≥ 0.60 for them to be retained.

More detailed methods and data analysis procedures are contained within each chapter of results that deal with a specific topic area.

CHAPTER III

VISITOR CHARACTERISTICS

Introduction

An individual's attitudes and preferences may be influenced by characteristics such as age, sex, or place of residence. A visitor or respondent profile is also useful when comparing our findings to the results of other studies. The purpose of this portion of the study was to describe the socioeconomic and demographic traits of the sample population.

Methods

Section VI of the questionnaire (Appendix B) dealt with user characteristics. Socioeconomic variables examined were level of education, occupation, and household income. Demographic characteristics obtained were age, sex, and residence characteristics (urban/rural). Additionally, state of residence was obtained from the on-site contact sheet.

Results

Socioeconomic Characteristics

The respondents' socioeconomic characteristics are presented in Table 1. Respondents were well educated; the average education level was 15.6 years. As might be expected from the high level of education, a large number of the respondents (49.6%) were classified as professionals. Another 20.1% were still students. Only 12.0% of the respondents had "blue-collar" occupations. Average household income was also high. Sixty-three percent of the respondents had a household income of \$30,000 or more.

Table 1. Socioeconomic characteristics of backcountry backpackers, Great Smoky Mountains National Park - 1987.

Characteristic	N	%
Education ($\bar{x} = 15.6$)		
Elementary (1-8 years)	0	0.0
High School (9-12 years)	18	16.0
After High School (13+ years)	166	84.0
Occupation		
Professional	91	49.6
Student	37	20.1
Managers	14	7.6
Clerical and Sales	12	6.5
Service Workers	11	6.0
Craftsmen	6	3.3
Operatives	4	2.2
Self employed	3	1.6
Housewives	3	1.6
Others	3	1.5
Income		
Under \$10,000	12	6.6
\$10,000-\$19,999	23	12.7
\$20,000-\$29,999	32	17.7
\$30,000-\$39,999	30	16.6
\$40,000-\$49,999	25	13.8
\$50,000-\$74,999	40	22.1
\$75,000-\$99,999	9	5.0
\$100,000 and above	10	5.5

Demographic Characteristics

Eighty-three percent of the study respondents were male (Table 2). Age of study participants ranged from 16 to 64 years. Average age was 33.3 years (Table 2).

Although backpackers in the study came from 18 states, 65% of the backpackers came from the following four states: Tennessee (29%), Florida (14%), North Carolina (13%), and Georgia (9%) (Table 3). Most of the backpackers (77%) came from cities or metropolitan areas (Table 4).

Discussion

Demographic characteristics of Great Smoky Mountain winter backcountry users were examined by Hughes (1985). Backcountry backpackers in the present study were similar to winter backpackers in terms of place of residence and age. Hughes also found that more than 60% of the users came from the following four states: Tennessee (31%), Georgia (17%), North Carolina (10%), and Florida (5%). Average age of winter backpackers was 29.5 years (compared to 33.3 years in the present study). However, there was a difference in terms of gender. Only 1% of the winter backpackers were female, compared to 17% in the present study.

Overall, the socioeconomic and demographic characteristics of the respondents in the present study were similar to those found in other studies of wilderness users. Roggenbuck and Lucas (1985) reported that most wilderness users are well educated, male (70-85% in most studies), professionals (30-40% in most studies) or students (20-30% in most studies), and urban residents (60% in most studies).

Table 2. Gender and age of backcountry backpackers, Great Smoky Mountains National Park - 1987.

Characteristic	N	%
Gender		
Male	153	83.2
Female	31	16.8
Age ($\bar{x} = 33.3$)		
16-20	22	12
21-25	31	17
26-30	30	16
31-35	20	11
36-40	35	19
41-45	23	13
46-50	22	4
51-64		8

Table 3. Backcountry backpackers' state of residence, Great Smoky Mountains National Park - 1987.

State	N	%
Tennessee	54	29.4
Florida	26	14.2
North Carolina	24	13.0
Georgia	16	8.7
Alabama	10	5.4
Indiana	9	4.9
South Carolina	7	3.8
Illinois	6	3.3
Ohio	6	3.3
Texas	6	3.3
Louisiana	5	2.7
Michigan	4	2.2
Missouri	3	1.6
Virginia	3	1.6
Connecticut	2	1.1
California	1	0.5
Kentucky	1	0.5
New York	1	0.5

Table 4. Backcountry backpackers' residence, Great Smoky Mountains National Park - 1987.

Residence	N	%
Large Metropolitan area (> 1,000,000 people)	26	14.1
Metropolitan area (100,000 - 1,000,000 people)	59	32.1
City (10,000 - 100,000)	57	31.0
Small Town (under 10,000)	20	10.9
Rural (non-farm)	13	7.1
Rural (farm)	9	4.8

CHAPTER IV

TRIP CHARACTERISTICS

Introduction

Trip characteristics such as party size and use patterns such as length of stay may influence or reflect the types of recreational experiences that backpackers are seeking. For example, intimacy may be important to recreationists backpacking with family and friends, while those backpacking alone would not be expected to be concerned with this aspect of wilderness privacy. Additionally, recreationists develop beliefs about appropriate conduct and settings on the basis of their own behavior, so information on the characteristics of an individual's typical backpacking trip may be useful in interpreting visitor attitudes or preferences. The following data on trip characteristics and use patterns were collected to provide information pertaining to these issues.

Methods

Section I of the questionnaire (Appendix B) dealt with general backpacking trip characteristics. Individuals who had no prior backpacking experience were asked to respond to the questions on the basis of the trip during which they were contacted. Individuals who had prior experience were asked to respond to the questions in terms of an average backpacking trip. Characteristics which were examined included party composition and size, trip duration, distance traveled, and trip timing (season and time of week). Seasons were defined as summer (June-August), fall (September-November), winter (December-February), and spring (March-May). Time of week was divided into weekday (Monday-Thursday) and weekend (Friday-Sunday).

Results

Party Composition and Size

Friends were the most common companions on backpacking excursions; 50% of the backpackers typically hiked with friends (Table 5). The next most common social groups (32%) were families or a mixture of family and friends. Backpackers who hiked with organized clubs were less prevalent, but nearly 13% of the backpackers stated that they most frequently hiked in this type of group.

The majority of backpackers (73%) hike in small groups of 2-4 individuals (Table 6). Only 5% typically backpack alone and only 4% of the backpackers hike in groups of 10 or more individuals. The only respondents who normally backpacked in groups of more than six individuals were members of organized clubs.

Trip Duration and Distance Traveled

Typical backpacking trips lasted 1 to 10 days. Ninety-four percent of the backpackers normally took trips lasting less than six days (Table 7). The average trip length was 3.2 days. Distances hiked during backpacking trips ranged from 3 to 80 miles. Most backpackers (59%) hiked between 11 and 30 miles during typical trips (Table 8). The average distance traveled was 24.0 miles. Distances traveled before the first campsite was set up ranged from 1 to 35 miles (Table 9). The average distance traveled to the first campsite was 6.6 miles.

Season of Use

Backpackers most frequently went on trips during the summer season, while the lowest percentage of individuals did most of their backpacking in the spring (Table 10). Trips beginning during the weekend were far more common than trips which began during the week (Table 11).

Table 5. Type of social group in which backpackers hiked, Great Smoky Mountains National Park, 1987.

Social Group	N	%
Alone	10	5.4
Friends	92	50.1
Family	19	10.3
Family and Friends	40	21.7
Organized Clubs	23	12.5

Table 6. Party size of average backpacking trips, Great Smoky Mountains National Park, 1987.

Party Size	N	%	Cumulative %
1	9	4.9	4.9
2	66	35.9	40.8
3	23	12.5	53.3
4	45	24.5	77.7
5-6	25	13.6	91.3
7-9	9	4.9	96.2
10+	7	3.8	100.0

Table 7. Length of average backpacking trips, Great Smoky Mountains National Park, 1987.

Number of Days	N	%	Cumulative %
1	2	1.1	1.1
2	65	35.3	36.4
3	65	35.3	71.7
4	25	13.6	85.3
5	16	8.7	94.0
6	2	1.1	95.1
7	6	3.3	98.4
8	2	1.1	99.5
10	1	0.5	100.0

$\bar{x} = 3.2$ days.

Table 8. Distance hiked during average backpacking trips, Great Smoky Mountains National Park, 1987.

Average Miles Traveled	N	%	Cumulative %
3-5	4	2.2	2.2
6-10	31	17.1	19.3
11-20	68	37.6	56.9
21-30	39	21.5	78.5
31-40	22	12.2	90.6
41 +	17	9.4	100.0

$\bar{x} = 24.0$ miles

Table 9. Distance traveled before setting up first camp, Great Smoky Mountains National Park, 1987.

Miles traveled to First Camp	N	%	Cumulative %
1	1	0.5	0.5
2	6	3.3	3.8
3	10	5.4	9.2
4	27	14.7	23.9
5	39	21.2	45.1
6	32	17.4	62.5
7	16	8.7	71.2
8	15	8.2	79.3
9	6	3.3	82.6
10	20	10.9	93.5
12	5	2.7	96.2
13	2	1.1	97.3
14	1	0.5	97.8
15	2	1.1	98.9
20	1	0.5	99.5
35	1	0.5	100.0

$\bar{x} = 6.6$ miles.

Table 10. Season during which backpackers most frequently went backpacking, Great Smoky Mountains National Park, 1987.

Season	N	%
Summer	126	68.5
Fall	33	17.9
Winter	15	8.2
Spring	10	5.4

Table 11. Period of week when backpackers normally started trips, Great Smoky Mountains National Park, 1987.

Time of Week	N	%
Weekday (Mon-Thurs)	60	32.8
Weekend (Fri-Sun)	123	67.2

Discussion

Trip characteristics for summer and winter backcountry campers in the Great Smoky Mountains National Park have previously been examined by Hammitt and Hughes (1984). These researchers reported that average trip duration was longer for summer than for winter backcountry users. Average trip duration was 3.0 nights for summer users and only 2.1 nights for winter backpackers. The average in the present study (2.2 nights) was similar to the average for winter users. However, there were more one-night campers in the winter sample than in the sample from the present study. Fifty percent of the winter users were on trips lasting only one night. In the present study, 64% of the users took trips lasting 2 or more nights (Table 12).

Average trip length also was greater for summer users than for winter users in 1979 (Hammitt and Hughes, 1984). At that time, average trip length was 18.3 miles and 27.8 miles for winter and summer users, respectively. The average trip length reported in the present study was 24.0 miles.

In the earlier study, Hammitt and Hughes also noted a difference in time of week during which the backpacking trip started. In the winter, most trips (77%) began on the weekend. In the summer, most trips (52%) began on a weekday. In the present study, most backpackers (67%) reported that trips typically began on the weekend.

The only trip characteristic for which there was no significant difference between summer and winter users in 1979 was party size. In the previous study, more than 60% of all parties consisted of one or two individuals. This differs from the distribution reported in the present study (Table 13). Only 41% of the respondents in this study reported that they typically hike in parties of one or two individuals.

Table 12. Length of stay for backcountry backpackers, Great Smoky Mountains National Park.

Number of Nights	Winter, 1979 ¹ %	Summer, 1979 ¹ %	Summer, 1987 %
1	50	27	36
2	24	23	35
3	11	18	14
4	5	12	9
5	3	8	1
6+	7	12	5
	$\bar{x} = 2.1$	3.0	2.2

¹ From Hammitt and Hughes 1984.

Table 13. Party size of backcountry backpackers in the Great Smoky Mountains National Park.

Number of People	Winter ¹ %	Summer ¹ %	1987 %
1	14	15	5
2	48	50	36
3	18	15	13
4	11	9	25
5	9	11	22

¹ From Hammitt and Hughes 1984.

Extensive summaries of wilderness user trip characteristics are available (Hendee et al. 1978, Lucas 1980, Lucas 1985, Roggenbuck and Lucas 1985), but most of the studies cited in these papers are not comparable to the present study because these studies include data on dayhikers in addition to overnight backpackers. A few studies present data on average length of stay and day of entry which are comparable to the data obtained in the present study. These comparisons are shown in Table 14.

Table 14. Comparison of backpacking trip characteristics reported in this and other studies.

Area	Average Length of Stay (Nights)	Day of Entry	
		Weekend (%)	Weekday (%)
Great Smoky Mtn. ¹	2.20	67.2	32.8
Great Gulf Wilderness ²	1.99	45.5	54.6
Shining Rock ³	1.9	----	----
Joyce Kilmer-Slick Rock Wilderness ³	2.8	----	----
Yosemite ⁴	2.70	----	----

¹ This Study

² Leonard et al. 1978

³ Roggenbuck et al. 1979

⁴ Van Wagtendonk 1981

CHAPTER V

COGNITIVE DIMENSIONS OF WILDERNESS PRIVACY: A FIELD TEST

Introduction

The Wilderness Act of 1964 (Public Law 88-577) specifically states that congressionally designated wilderness should provide outstanding opportunities for "solitude or a primitive and unconfined type of recreation" (Hendee et al., 1978:68). While the Wilderness Act is clear to specify the concept "solitude" in its directive, the Act does little toward providing a psychological understanding of the concept or the many realms of privacy-solitude which wilderness may provide. As a consequence, researchers have had to go to the disciplines of psychology, sociology, and philosophy for a basis of understanding the construct of privacy-solitude and how it relates to wilderness recreation (Stankey, 1973; Lee, 1977; Hendee et al., 1978; Twight et. al., 1981; Hammitt, 1982; Hammitt and Brown, 1984; Hummel and Miller, 1986).

In 1981 and 1982, Hammitt and colleagues (1982; 1984) used the philosophical writings of Westin (1967) to develop a wilderness privacy scale. The purpose of these two laboratory studies was to develop an instrument for exploring and measuring the various dimensions and functions of privacy operating among wilderness users. The scale was developed with university students in outdoor recreation classes, but never field tested in a backcountry-wilderness area.

The purpose of this chapter is to report the results of a field study where the "Dimensions of Privacy Scale" developed in 1981 was administered to 184 backpackers in Great Smoky Mountains National Park. The findings of the field test are compared with the results of the 1981 laboratory study.

Objectives of the comparison were to determine if the laboratory developed scale would produce similar psychological constructs of privacy when field tested, and if the strength of the privacy dimensions would be similar between laboratory and field respondents.

While the reader is referred to the 1981 study (Hammitt, 1982) for a complete theoretical and conceptual basis of the current study², a brief review of the prior developmental work is necessary in order to compare the results of the developmental and field studies.

In 1981, 109 college students with prior backpacking experience and enrolled in outdoor recreation classes at three universities were administered a 20-item privacy scale developed from the philosophical writings of Westin (1967). Westin defined privacy as "the claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others and from others to them" (p.7). It is a means by which people adjust information processing mechanisms to the barrage of personal and social stimuli that they encounter in daily life. Privacy is not a permanent state of being, but a voluntary and temporary withdrawal of a person from the general society through physical or psychological means, either in a state of solitude or small-group intimacy or, when among larger groups, in a condition of anonymity or reserve.

Westin (1967) states that there are four basic dimensions of privacy, of which solitude is only one:

²A review of the privacy literature, Westin's treatment of privacy and freedom, and the outdoor recreation solitude literature is provided in the 1982 publication.

Solitude - complete isolation, the individual is separated from the group and freed from the observation of others.

Intimacy - the individual is acting as part of a small unit, seeking to achieve a close, personal relationship between two or more select members.

Anonymity - the individual is in a public setting but still seeks and achieves freedom from identification, surveillance, and social roles.

Reserve - the individual keeps a "mental distance," creates a psychological barrier against unwanted intrusion, and reserves the right not to reveal certain aspects about oneself.

Based on a factor analysis of the classroom importance ratings for the 20-item privacy scale, four dimensions (factors) of wilderness privacy were produced.

Methods

Section V of the questionnaire (Appendix B) contained a battery of 20 items characterizing various aspects of wilderness privacy/solitude. A seven-point Likert scale (1=extremely important, 7=not at all important) was used to register individual importance ratings for each item. Items included in the privacy scale were researcher generated, based on a content analysis of Westin's four categories of privacy (outlined above) and from research conducted by Stankey (1973), Altman (1975) and Twight et al. (1981). However, items involving Westin's conceptualizations of isolation, intimacy, and freedom of choice over information processed were specifically included. It was essential to determine respondent support for each one of these specific aspects of privacy and how they might

factor, in order to link the conceptual arguments of Westin with the empirical analysis being performed.

Data analysis involved the ranking of the individual scale items by mean importance values and standard deviations. Factor analysis, involving principal factoring with iteration and orthogonal varimax rotation, was used to determine common dimensions of privacy/solitude among the scale items. Factor loadings had to be ≥ 0.40 for items to be included in a factor, and only factors with eigenvalues ≥ 1.0 were extracted. Also, the internal consistency reliability (Cronbach's alpha) of factors had to be > 0.60 for them to be retained.

Results and Discussion

Mean importance values and standard deviations for the 20 items in the privacy scale are reported in Table 15. Factor analysis of the privacy scale items produced four dimensions of wilderness privacy in the developmental study (Table 16) and six dimensions in the field test (Table 17). While only 15 of the 20 items met the factor loading criteria of ≥ 0.40 in the development test, all 20 items met the criteria and were retained in the field study.

Comparison of Respondents

Before comparing the results obtained for the 1981 and 1987 studies, a brief comparison of the respondents is necessary. The 1981 respondents were students of the University of Illinois (20), West Virginia University (23), and the University of Tennessee (66), enrolled in outdoor recreation/natural resources classes. The students completed the privacy scale while in the classroom. They averaged 22 years of age and 6.5 years

Table 15. Mean importance of individual items in wilderness privacy scale,¹ for laboratory (1981) and field (1987) respondents.

Item	Mean		Standard Deviation	
	1981	1987	1981	1987
The tranquility and peacefulness of the remote environment	1.44	1.45	0.75	0.76
An environment free of man-made noises	1.71	1.47	0.93	0.89
Freedom of choice as to actions and use of time	1.83	2.00	0.91	1.22
Being yourself, free from the expectations of others	1.87	2.34	0.99	1.34
An environment free of man-made intrusions	2.00	1.86	1.11	1.20
Freedom to control your thoughts, regardless of being with a small group or by yourself	2.02	2.34	0.99	1.24
Being in a completely natural environment	2.03	1.84	1.17	1.01
Control over the pressures and tensions of everyday life	2.07	1.95	1.18	1.01
Free to limit your attention to whatever you choose	2.10	2.11	1.05	1.26
A small, intimate group relationship which permits individual isolation when one desires it	2.28	2.29	1.08	1.16
A small, intimate group experience, isolated from all other groups	2.31	2.86	1.04	1.22
Being relieved from rules and constraints of society	2.44	3.23	1.41	1.79
An opportunity to socialize with friends or family without being interrupted by others	2.50	3.03	1.10	1.35
Privacy from most people, yet a personal relationship with my family or friends	2.51	2.61	1.09	1.31
Freedom to choose when and to what extent you have to speak and interact with others	2.57	2.75	1.12	1.40
Free from observation by all other people	2.95	3.34	1.46	1.47

Table 15 (cont.). Mean importance of individual items in wilderness privacy scale for laboratory (1981) and field (1987) respondents.

Item	Mean		Standard Deviation	
	1981	1987	1981	1987
Being able to limit your attention to only a few chosen people.	3.21	3.01	1.56	1.41
An isolated experience, by yourself.	3.39	3.66	1.61	1.74
An environment where I can assume an anonymous identity.	3.94	3.69	1.65	1.67
Free from daily body maintenance (ie. bathing, shaving) if one wishes.	4.02	4.18	1.63	1.82

¹ Ratings are based on a seven-point Likert scale, where 1 = extremely important, 2 = very important, 3 = somewhat important, 4 = neutral, 5 = somewhat unimportant, 6 = unimportant, 7 = not at all important.

Table 16. Dimensions of wilderness privacy, based on factor analysis of individual component ratings of classroom students (1981 study).

Dimensions And Factored Items	Factor Loadings	Factor ¹ Mean	Factor ² Alpha Value
<u>Natural Environment</u>			
An environment free of man-made intrusions.	0.8981		
An environment free of man-made noises.	0.7149		
Being in a completely natural environment.	0.6998	1.77	0.82
The tranquility and peacefulness of the remote environment.	0.5461		
<u>Cognitive Freedom</u>			
Free to limit your attention to whatever you choose.	0.7406		
Freedom of choice as to actions and use of time.	0.6268	1.96	0.71
Freedom to control your thoughts, regardless of being with a small group or by yourself.	0.6129		
<u>Intimacy</u>			
Privacy from most people, yet a personal relationship with my family or friends.	0.7831		
An opportunity to socialize with friends or family without being interrupted by others.	0.6073		
A small, intimate group experience, isolated from all other groups.	0.4788	2.60	0.67
Being able to limit your attention to only a few chosen people.	0.4246		
Freedom to choose when and to what extent you have to speak and interact with others.	0.4217		

Table 16 (cont.). Dimensions of wilderness privacy based on factor analysis of individual component ratings of classroom students (1981 study).

Dimensions And Factored Items	Factor Loadings	Factor Mean	Factor Alpha Value
<u>Individualism</u>			
Being relieved from rules and constraints of society.	0.6557		
Free from daily body maintenance if one wishes.	0.5657	2.78	0.60
Being yourself, free from the expectations of others.	0.4882		

1. Mean values based on a 7-point likert scale, where 1=extremely important, 7 = not at all important.
2. Cronbach's alpha.

Table 17. Dimensions of wilderness privacy, based on factor analysis of individual component ratings of Great Smoky Mountain backpackers (1987 study).

Dimensions And Factored Items	Factor Loadings	Factor ¹ Mean	Factor ² Alpha Value
<u>Natural Environment</u>			
An environment free of man-made intrusions.	0.7763		
An environment free of man-made noises.	0.7446		
The tranquility & peacefulness of the remote environment.	0.6665	1.66	0.76
Being in a completely natural environment.	0.6419		
<u>Individual Cognitive Freedom</u>			
Free to limit your attention to whatever you choose.	0.7867		
Freedom of choice as to actions and use of time.	0.7689	2.09	0.81
Control over the pressures and tensions of every day life.	0.6431		
A small, intimate group relationship which permits individual isolation when one desires it.	0.5739		
<u>Social Cognitive Freedom</u>			
Being yourself, free from the expectations of others.	0.7469		
Freedom to choose when and to what extent you have to speak and interact with others.	0.7145	2.48	0.79
Freedom to control your thoughts, regardless of being with a small group or by myself.	0.6033		
<u>Intimacy</u>			
An opportunity to socialize with friends or family without being interrupted by others.	0.7660		
Privacy from most people, yet a personal relationship with my friends or family.	0.7469	2.48	0.79
Being able to limit your attention to only a few chosen people.	0.7145		

Table 17 (cont.). Dimensions of wilderness privacy, based on factor analysis of individual component ratings of Great Smoky Mountain backpackers (1987 study).

Dimensions And Factored Items	Factor Loadings	Factor Means	Factor Alpha Value
<u>Isolation</u>			
A small, intimate group experience, isolated from all other groups.	0.7317		
An isolated experience, by yourself.	0.6520	3.15	0.69
<u>Individualism</u>			
Free from daily body maintenance.	0.7719		
Being relieved from rules and constraints of society.	0.7139	3.62	0.72
An environment where I can assume an anonymous identify.	0.5639		
Free from observation by all other people.	0.4575		

1. Mean values based on a 7-point Likert scale, where 1=extremely important, 7=not at all important.
2. Cronbach's alpha.

of backpacking experience. The 1987 respondents represented many education/occupation levels and wilderness backpacking experiences. They were contacted in the field while backpacking. Their average age and years of backpacking experience were 33 and 6.8, respectively.

Comparison of Individual Item Means

Comparison of the means between the developmental and field tests of the scale items shows the following major similarities and differences:

1. Both tests show "tranquility and peacefulness of the remote environment" and "an environment free of man-made noises" to be the two most important privacy items.
2. The last four items, dealing with "an isolated experience, free from the observation of others, and an anonymous identity, etc." were least important in both tests.
3. Laboratory respondents were most different from field respondents in rating intimacy items more important (i.e. "an opportunity to socialize with friends or family without being interrupted by others", "a small intimate group experience, isolated from all other people").
4. To a lesser degree, field respondents differed from laboratory respondents by rating the natural, noise-free aspects of the environment more important, while the laboratory respondents found the cognitive and societal freedom aspects more important.

In summary, the two studies were quite similar with the natural, remote environment that is free of man-made noises and intrusions; and that offers freedom of choice in terms of one's actions and use of time, control over everyday pressures/tensions, and attention load, being the most important elements of wilderness privacy. Where differences do occur, it is

impossible to assign all the variation to the "field" versus "laboratory" aspect of the study. The respondents in the two studies do vary in many respects and may account for the variation, regardless of where the study was conducted.

Comparison of Privacy Dimensions

Comparison of the privacy dimensions indicates that the field test produced two dimensions concerning "cognitive freedom" instead of one, and a new "isolation" factor. Scale items concerning isolation did not factor as a coherent dimension in the developmental study.

Because there is content similarity in the dimensions received in the developmental and field studies, an interpretive description will be offered only for the six dimensions of the field respondents.

Natural Environment: The exact same four items appeared in this dimension in both studies. Classrooms students and the field respondents also agreed that the most important dimension of wilderness privacy involved being in a remote, natural environment that is removed from man-made noises and intrusions, thereby offering a sense of tranquility and peacefulness (dimension mean = 1.66). As in the 1981 study, field respondents found man-made noises more important for wilderness privacy than man-made intrusions (Table 15). Also replicated in the field study is the importance of the tranquility and peacefulness item (which received the highest single item mean) and its factoring with the natural environment and lack of man-made noise/intrusion items. Its factor loading with these items was even stronger in the field study. The field test further confirms the privacy importance of natural environments, of which wilderness areas are the ultimate example. Wilderness, by definition,

lacks man-made noises and intrusions that inhibit individual freedom of choice, tranquility, and peace of mind.

Individual Cognitive Freedom & Social Cognitive Freedom: As in the 1981 study, Cognitive Freedom ranked second only to the Natural Environment as the most important dimension of wilderness privacy. Freedom of choice concerning the information wilderness users must process and the behavior demanded of them are important cognitive issues in wilderness (Hammitt, 1982). The freedom to direct one's thoughts, attention, and use of time to what is fascinating is something a natural environment free of intrusions should foster. However, two dimensions of "cognitive freedom" may be at play in wilderness (Table 17). The one involves cognitive freedom at an "individual" level, while the second involves cognitive freedom at a "social " level. The Social Cognitive Freedom factor in Table 17 differs from the Individual Cognitive Freedom factor by containing items that all relate specifically to "others" or "small group." Items in the Individual Cognitive Freedom factor are more individualistic, with some indication that they may be related to the freedom of choice usually exercised at an individual's discretion. One can be in the presence of selected "others" and still operate in a cognitive sense at two levels, one at the individual level and the second at a controlled interactive level free from the expectations/thought processes of every day society. Wilderness party leaders, in particular, may operate at these two levels of cognitive freedom. Individual Cognitive Freedom was rated more important than Social Cognitive Freedom by respondents ($\bar{x}$ =2.09 versus 2.48, respectively).

Intimacy: Fourth in importance as a form of wilderness privacy was the intimacy afforded by a small group of chosen friends ($\bar{x}$ =2.48). However, the intimate, small group appears to offer benefits beyond the

personal affiliation and social bonds typically attributed to intimacy. Factoring in this dimension were items dealing with privacy from most people and the opportunity to limit your attention to only a few chosen people, without being interrupted. The opportunity for controlled and personal socialization with a small group of chosen friends, where attention can be limited and focused, allows for the cohesiveness of intimate relationships. The freedom to focus your attention and control interruptions from others also relates closely with the last item in the Social Cognitive Freedom dimension: "Freedom to control your thoughts, regardless of being with a small group or by yourself." The freedom to control one's thoughts, even when participating in a small intimate group, seems important to wilderness users, as the latter item was rated higher in importance ($\bar{x}=2.34$) than the intimacy items.

It is important when interpreting the intimacy dimension of wilderness privacy-solitude to realize that the social context of this dimension is not in conflict with the freedom of choice and cognitive freedom that individuals desire. The privacy-solitude wilderness users seek seems to be the withdrawal from complex social environments where they have little control over with whom and to what extent they must interact and communicate, rather than complete withdrawal from all people. Even though wilderness users value cognitive freedom and the natural environment highly, they also exhibit certain forms of sociability while in the wilderness. Users desire an element of social interaction within their intimate groups, yet a degree of privacy from outside groups. However, symbolic communication with members of other parties does not seem to detract from the privacy desired (Altman, 1975; Lee 1977).

Isolation: Isolation did not appear as a coherent dimension of wilderness privacy among college students in the developmental investigation, but did among Great Smoky Mountain backpackers. Hummel and Miller (1986) point out potential problems with the "negative" perceptions and biases of the public toward the use of the words "isolation" and "feeling alone" to survey support for privacy and solitude. They found respondents to react more positively to the label "shared-isolation" (i.e. the individual's feeling of being alone while in the physical presence of special others). College students may be more sensitive to these anti-social perceptions of isolation than more experienced and specialized wilderness users.

The two items in the Isolation dimension in Table 17 could be interpreted as shared-isolation, for the dimension does not necessarily infer a wilderness experience by one's self. Isolation can occur by yourself and apparently, with a small intimate group that is isolated from all other groups. This dimension, because it contains only two items, should not be considered a valid measure of the "isolation" aspect of wilderness privacy. More isolation items need to be added to the privacy scale to develop this dimension.

Individualism: Last in importance, in both studies, was the individualism-anonymous identity form of privacy ($\bar{x}=3.62$). Field respondents rated it nearly a full point less important than did college students. Factoring in this dimension were items concerning one's identity and individual freedom from the observations and obligations of society. Role identity seems to be involved here, for individuals must be free from the rules, constraints, and observations of society to determine their actions and behavior and to experience tranquility. It is essential, however, not to confuse individualism with isolation of the individual.

Privacy in the form of individualism-anonymous identity can be found in the vastness of large cities (Westin, 1967), just as in the vastness of wilderness areas.

CHAPTER VI

PAST BACKPACKING EXPERIENCE

Introduction

Previous participation in a given recreational activity is related to the amount of information an individual has about that activity, and it can influence the frame of reference used to evaluate future recreational experiences (Schreyer, 1982). In a study of whitewater floaters, Schreyer (1982) found that desired psychological outcomes did not vary on the basis of the amount of experience; however, specificity with which desired outcomes were expressed did. Experienced users tended to provide more specific descriptions of desired outcomes than inexperienced users.

A related concept is that of recreational specialization. Bryan's (1977) study of trout fishermen suggests that recreationists can be thought of as being at some point on a continuum of specialization which ranges from the general to the specialized. Specialists are thought to have greater commitment to an activity and to emphasize the nature and setting of an activity more than generalists. Over time, recreationists are thought to move along this continuum from the general toward the more specialized stages. An important implication of this conceptual model is that individuals at the more specialized stages of a recreational continuum have values, preferences, attitudes, and behaviors which differ from those held by generalists (Bryan, 1977).

Experience with a particular recreational area may also influence expectations and evaluations. Individuals who are familiar with an area may have specific expectations about the types of experiences available there. Over time, this area may represent memories and traditions from past

experiences and become an important aspect of recreation participation (Jacob and Schreyer, 1980).

The previous discussion suggests that responses to the wilderness privacy scale may have been influenced by an individual's amount of previous backpacking experience. Therefore, it may be possible to obtain a better understanding of the various meanings of wilderness solitude by examining attitudes of individuals with different levels of past use experience. In the present study, this was done by comparing the dimensions of the wilderness privacy scale among three groups of backpackers with different levels of experience. These groups were defined using a participation experience index. The index was based on past backing experience and frequency of participation. In addition to measures of general backpacking experience, the index included measures of previous experience in the Great Smoky Mountains National Park.

Methods

Previous backpacking experience was examined in section II of the questionnaire (Appendix B). All study participants were asked about the relative importance of backpacking compared to other outdoor activities offered by the park and whether or not they were the group leader on the trip during which they were contacted. Study participants who had previous experience were asked about past backpacking involvement in general as well as prior backpacking experience in the Great Smoky Mountains National Park. Information obtained included years of experience, average number of trips per year, and average number of trips taken during the summer (June-August), fall (September-November), winter (December-February), and spring (March-May). Years of backpacking experience was measured by asking study participants to list the total number of individual years during which they

had gone on a backpacking trip. For example, if a person had hiked in 1970, 1981, and last month, then the appropriate reply would be 3 years.

An index consisting of four experience variables (years of general backpacking experience, trips per year, years of backpacking experience in the GSMNP, and trips per year in the GSMNP) was created to form a comprehensive measure for evaluating the effects of experience on responses to the wilderness privacy scale. (Only individuals who had previously backpacked in the Great Smoky Mountains National Park were used in this analysis.)

The index was constructed in the following manner. First, three ordinal categories (low, moderate, and high) were created for each experience variable. Assignment to one of the three categories was based on the frequency distribution of responses to each of the four variables. Individuals who gave response falling in the lower third of the distribution were assigned to the low category, those whose responses were in the upper third of the distribution were assigned to the high category, and the remaining individuals were placed in the moderate category. (The resulting numerical divisions for these categories are presented in Table 18). Next, the ordinal categories (low, medium, and high) were assigned a value of 1, 2, and 3 respectively. The numerical values for each of the four experience variables were then added together to form a single experience score. Finally, the overall experience index was created by assigning experience scores to one of three categories (low, moderate, or high). Again, this was done on the basis of the frequency distribution of scores. The low category was made up of individuals with scores in the lower third of the distribution, and so on.

Table 18. Numerical definitions of low, moderate and high categories of the four experience variables and the overall experience index.

Variable	<u>Experience Category</u>		
	Low	Moderate	High
General Experience (yrs.)	1-3 (31.9%) ¹	4-7 (39.8%)	8+ (28.3%)
Trips per year	1-2 (34.8%)	3-4 (33.1%)	5+ (32.1%)
GSMNP Experience (yrs.)	1-2 (33.8%)	3-4 (30.6%)	5+ (35.6%)
GSMNP Trips per year	1 (42.0%)	2-3 (35.0%)	4+ (23.0%)
-----	-----	-----	-----
EXPERIENCE INDEX	4-6 (31.7%)	7-8 (32.7%)	9+ (35.6%)
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¹ Percent of sample respondents (n=101) in the category.

Mean importance ratings for the six solitude factors were compared across each of the three levels of backpacking experience. Differences among experience classes were examined using analysis of variance and Duncan's Multiple Range Test.

Results

Importance of Backpacking

Most of the backpackers in the study felt that backpacking is one of the most important activities offered by the park. When asked to rate the importance of backpacking relative to other activities offered by the park, 57% of the respondents rated it as extremely important and an additional 35% rated it as very important (Table 19).

Group Leaders

Study participants included group leaders and individuals who were not group leaders for the trip during which they were contacted. Fifty-nine percent of the respondents were group leaders, and 41% were not.

General Backpacking Experience

Eighty-four percent of the respondents had previous backpacking experience. Of the respondents with some backpacking experience, 52% had less than 6 years of experience, while 16% had been backpacking for more than 10 years (Table 20). Most backpackers (59%) took three or fewer trips per year and very few (5%) took more than 10 trips annually (Table 21). Most backpackers (85%) take trips during the summer, but less than one-third took trips during the winter (Table 22). The average number of trips per season was greatest during the summer and lowest during the spring (Table 22).

Table 19. Importance of backpacking relative to other activities offered by the park, Great Smoky Mountains National Park, 1987.

Importance Response	% of Backpackers Indicating response
Extremely Important	56.8
Very Important	35.4
Moderately Important	7.2
Slightly Important	0.6
Not Important at all	0.0

Table 20. Number of years of backpacking experience (anywhere) for those backpackers having previous experience, Great Smoky Mountains National Park, 1987.

Years of Experience	N	%	Cumulative %
1	11	7.1	7.1
2	21	13.5	20.6
3	17	11.0	31.6
4	21	13.5	45.2
5	11	7.1	52.3
6	16	10.3	62.6
7	10	6.5	69.0
8	9	5.8	74.8
9	3	1.9	76.8
10	11	7.1	83.9
11-15	10	6.5	90.3
16-20	9	5.8	96.1
21+	6	3.9	100.0

$\bar{X} = 6.78$ years.

Table 21. Number of backpacking trips per year (anywhere) for those backpackers having previous experience, Great Smoky Mountains National Park, 1987.

Trips per Year	N	%	Cumulative %
1	37	24.0	24.0
2	34	22.1	46.1
3	20	13.0	59.1
4	21	3.6	72.7
5	12	7.8	80.5
6	10	6.5	87.0
7	1	0.6	87.7
8	7	4.5	92.2
10	5	3.2	95.5
11+	7	4.5	100.0

$\bar{X} = 3.94$ trips per year.

Table 22. Seasons during which experienced backpackers (N=155) take backpacking trips (anywhere), Great Smoky Mountains National Park, 1987.

Season	% of Backpackers Which Take Trips During Season	Mean Number of Trips Per Season ¹
Summer (June-Aug)	85.2	2.16
Fall (Sept-Nov)	56.1	2.07
Winter (Dec-Feb)	27.1	1.88
Spring (Mar-May)	41.3	1.75

¹ Mean calculated only for those backpackers taking trips during the specified season.

Great Smoky Mountain Backpacking Experience

Sixty-five percent of the backpackers with previous experience had backpacked in the Great Smokies before. Most of the respondents who had previously backpacked in the park (66%) had more than 2 years of experience in the park (Table 23). Sixty-six percent of the backpackers took less than 3 trips per year in the Great Smokies and only 4% took more than 10 trips per year (Table 24).

As with general backpacking experience, most respondents (83%) were active in the summer, while only a minority (23%) backpacked in the winter (Table 25). The average number of trips taken per season in the Great Smokies was highest in the fall and lowest during the spring (Table 25).

Backpacking Experience and the Privacy Scale

All three experience groups ranked the six dimensions of the wilderness privacy scale in the same order of importance (Table 26). Natural Environment was the most important dimension and Individualism was the least important.

Users classified as having a high degree of experience gave greater importance ratings to each of the six privacy dimensions than did inexperienced users (Table 26). However, the ANOVA procedure indicated that mean importance ratings were significantly different at the 0.05 level for only one of the dimensions; Natural Environment (Table 26). Users with a high degree of experience rated this dimension as significantly more important than moderately experienced users. Although highly experienced users also gave a higher importance rating to this dimension than did backpackers with a low level of experience, the difference was not significant.

Table 23. Number of years of backpacking experience in the Great Smoky Mountains National Park for those backpackers having previous experience in the park (1987).

Years of Experience	N	%	Cumulative %
1	10	9.9	9.9
2	24	23.8	33.7
3	16	15.8	49.5
4	15	14.9	64.4
5	10	9.9	74.3
6	2	2.0	76.2
7	2	2.0	78.2
8	5	5.0	83.2
10	2	2.0	85.1
11-15	9	8.9	94.1
16-20	3	3.0	97.0
21+	3	3.0	100.0

$\bar{X} = 5.39$ years.

Table 24. Number of Great Smoky Mountain National Park backpacking trips per year for those backpackers having previous experience in the park (1987).

Trips per Year	N	%	Cumulative %
1	42	42.0	42.0
2	24	24.0	66.0
3	11	11.0	77.0
4	9	9.0	86.0
5	3	3.0	89.0
6	3	3.0	92.0
8	2	2.0	94.0
10	2	2.0	96.0
12	1	1.0	97.0
16	2	2.0	99.0
35	1	1.0	100.0

$\bar{X} = 3.07$ trips per year.

Table 25. Seasons during which experienced backpackers (N=102) take backpacking trips in the Great Smoky Mountains National Park (1987).

Season	% of Backpackers Which Take Trips During Season	Mean Number of Trips ¹
Summer (June-Aug)	83.3	1.84
Fall (Sept-Nov)	40.2	2.10
Winter (Dec-Feb)	22.5	1.87
Spring (Mar-May)	30.4	1.81

¹ Mean calculated only for those backpackers taking trips during the specified season.

Table 26. Mean importance ratings for the wilderness privacy dimensions by individuals with different levels of experience, Great Smoky Mountains National Park, 1987.

Dimension	Experience Level			ANOVA Results	
	Low (N=32)	Moderate (N=33)	High (N=36)	F	P
Natural Environment	1.63 AB ¹	1.86 A	1.35 B	4.08	0.020
Individual Cognitive Freedom	2.09 AB ²	2.21 A	1.73 B	2.47	0.090
Social Cognitive Freedom	2.62	2.60	2.24	1.15	0.321
Intimacy	3.03	2.97	2.83	0.27	0.767
Isolation	3.43	3.01	2.97	1.46	0.238
Individualism	3.85 A ²	3.39 AB	3.21 B	2.48	0.089

¹ Means with different letters are significantly different ($p \leq 0.05$).

² Means with different letters are significantly different ($p \leq 0.10$).

For two privacy dimensions (Individual Cognitive Freedom and Individualism), mean importance ratings by the three experience groups differed at the 0.10 level of significance (Table 26). For Individual Cognitive Freedom, experienced backpackers gave a higher mean importance rating than moderately experienced users. While the mean rating for backpackers with a low level of experience was lower than the mean for highly experienced users, the difference was not significant. In the case of Individualism, the mean importance ratings by users with a low level of experience was significantly lower than the mean for backpackers with a high level of experience. The mean for moderately experienced backpackers did not differ significantly from either of the other two groups.

Discussion

The experience index did not provide much additional insight toward analyzing the important dimensions of wilderness privacy. The ranking of the six dimensions of wilderness privacy by relative importance was the same for all three experience categories. This suggests that the basic meaning attached to wilderness privacy is independent of previous backpacking experience. This homogeneity is not necessarily inconsistent with the concept of recreational specialization. If wilderness backpacking is viewed as a specialized stage of a recreational camping continuum and solitude is a distinguishing feature of this stage, then this sort of homogeneity would be expected.

Within individual privacy dimensions, comparison of importance ratings by backpackers with different levels of experience did indicate a significant difference for the Natural Environment dimension. Highly experienced users rated this dimension as more important than moderately experienced users. A possible explanation of this finding is that as

experience increases, wilderness backpackers focus more intently on the elements of the natural environment that are associated with wilderness privacy. This interpretation is consistent with the concept of recreation specialization. According to Bryan's (1977) conceptual model, specialization results in increased emphasis on the nature and setting of an activity. This interpretation also seems consistent with Schreyer's (1982) finding that experienced whitewater floaters are more specific in identifying outcomes and environmental standards and with his suggestion that increasing experience can lead to an increasing awareness and focusing on the environment.

An apparent contradiction to this explanation is present in that the mean importance rating by highly experienced users was not significantly greater than the mean rating of backpackers classified as having a low level of experience. This may indicate that there is no relationship. However, this contradiction could also result from the fact that privacy (in its many dimensions) is such an important issue to wilderness users that "too little" variation exists in the mean scores (scores were skewed to the lower end of the 1-7 point importance scale) to be separated statistically. Finally, the contradiction may be an indication that the manner in which the experience index was formed is not entirely appropriate. For example, the divisions between low, moderate, and high were determined arbitrarily by dividing the sample into thirds. Perhaps a more appropriate approach would be to define experience groups by using experience categories which seem intuitively reasonable rather than relying on the frequency distribution obtained in the sample.

Another potential problem in the way the index was constructed was that all four variables were considered equally important. This was done because the researchers thought that previous experience in the Great Smoky

Mountains might have an influence on the importance ratings. However, this resulted in some questionable assignments illustrated by the following two cases. A backpacker who takes two trips a year and had eight years of experience was classified as having a low level of experience while a backpacker who had one year of experience was classified as moderately experienced because he had taken four trips, all of which were in the Great Smokies. Possibly the issue of experience in the park should be examined separately or perhaps the experience variables should be weighted differently when the index is created.

In summary, grouping backpackers by experience level did not indicate differences in the order that the privacy dimensions were ranked. Within individual privacy dimensions, the results suggest a possible relationship between importance rating and experience level. Experienced backpackers rated the six dimensions as more important than inexperienced backpackers, but in most cases the difference was not statistically significant. This could indicate that the manner of defining experience level needs to be refined.

CHAPTER VII

VISITORS ENCOUNTERS AND WILDERNESS PRIVACY

Introduction

Solitude is commonly thought of as the state of being alone or isolated from others, which suggests that measures of user encounters are useful indicators of an area's ability to provide solitude. In fact, at least one economic model designed to determine social carrying capacity has been based on the belief that encounters with others intrude on a recreationist's feeling of solitude, thereby reducing the quality of the recreational experience (Graefe et al. 1984). Studies examining visitor evaluations of hypothetical use densities have supported the assertion that there is a negative relationship between user density and satisfaction with the recreational experience (Graefe et al. 1984). However, studies which have examined actual measures of user density (actual use levels, actual encounters, or reported encounters) have failed to verify the existence of this negative relationship (Graefe et al. 1984).

This section of the study dealt with information about visitor encounters. The purposes were (1) to determine backcountry campers' encounter preferences; (2) to compare actual encounter levels to stated preferences; and (3) to examine the effects of encounters on the recreational experience.

Methods

Section III of the questionnaire (Appendix B) dealt with visitor encounters. Backpackers were asked about actual encounters with other parties, the number of parties they expected to encounter, the effects of these encounters on the recreational experience, and their preferences with regard to encounters with other parties. Data obtained about actual

encounters included the number of encounters at different sites (trailhead, trail, trail junctions, first mile of trail, first 5-10 miles of trail, and campsite), the size of parties encountered, and the types of recreationists encountered (e.g. dayhikers, fishermen, horseback riders). The actual number of encounters was compared to the expected number of encounters by asking respondents whether they met more, fewer, or as many parties as expected. The effects of number of parties encountered and party size on the backpacking experience were examined using a 5-point scale ranging from added greatly to the experience to detracted greatly from the experience.

Preferences for the number of encounters were examined in two ways. First respondents were asked to state the maximum number of parties that could be encountered at various sites (trailhead, trail, and campground) before solitude reached unsatisfactory levels. Second, they were asked to estimate what they considered to be the ideal number of encounters for a single backpacking trip. Identical questions were asked with regard to respondents' preferences for the size of groups encountered.

Results

Actual Encounters

Table 27 shows the number of other parties encountered by respondents during their trip. Most encounters occurred on the trail ($\bar{x}=10.17$ parties). On average, wilderness backpackers in the Great Smokies met 4.28 parties at campsites and 2.66 parties at the trailhead. The size of parties encountered ranged from 1 to 10 ($\bar{x}=3.03$).

Eighty-eight percent of the backpackers in the survey encountered parties engaged in activities other than backpacking. The most commonly encountered recreationists were dayhikers (Table 28). Forty-three percent of the backpackers in the survey met park employees. (This percentage may

Table 27. Number of other parties encountered by backcountry backpackers in the Great Smoky Mountains National Park, 1987.

Location of Encounters	% of Backpackers Encountering At Least 1 Other Party	Average # of Encounters
Trailhead	47	2.66
Entire Trail	99	10.17
First Mile	49	1.47
First 5-10 Miles	72	2.68
Junctions	58	1.65
Campsites	97	4.28

Table 28. Number of encounters between backcountry backpackers and other types of recreationists in the Great Smoky Mountains National Park, 1987.

Type of Recreationist	% of Backpackers Encountering At Least 1 Individual (n=184)	Average # of People Encountered ¹
Dayhikers	66	8.57
Fishermen	7	2.38
Horseback Riders	25	3.85
Other Recreationists	10	10.44

¹ Average based only on those backpackers who encountered the specified recreationist.

be artificially high since it is possible that respondents considered the researchers to be park employees.) For those who did see park employees, the average number encountered during the trip was 2.62 individuals.

Expected Number of Encounters

Most of the study participants (68%) encountered as many or fewer parties than they originally expected to meet, but almost one-third of the respondents met more parties than expected (Table 29).

Effects of Encounters on the Recreational Experience

The backpackers' opinions varied greatly when asked about how the number of encounters affected the recreational experience (Table 30). Almost 42% of the study participants reported that the number of parties encountered enhanced the experience, while 32% felt that the number of encounters detracted from the experience. The remaining backpackers felt that the number of encounters had no impact on their experience.

Respondents showed greater consensus when asked about the effect of party size on the trip experience (Table 31). Sixty-three percent stated that the size of parties encountered did not influence their experience. However, 23% of the respondents felt that the size of parties encountered adversely affected the experience.

Preferences for Encounters

Table 32 presents the backpackers' responses to questions about the maximum number (hypothetical) of encounters which could be tolerated before solitude reached unsatisfactory levels. Tolerance appeared to be greatest for encounters along the trail and at the trailhead, and lowest for campsite encounters. The average ideal number of encounters for the entire trip was 4.07. The average estimates of the maximum acceptable party size

Table 29. Actual versus expected number of encounters for backcountry backpackers in the Great Smoky Mountains National Park, 1987.

Response	N	% of Backpackers Who Expressed Response
Encountered fewer parties than expected	51	27.9
Encountered about the same number of parties as expected	74	40.4
Encountered more parties than expected	58	31.7

Table 30. Effect of number of encounters on backcountry backpackers' recreational experiences in the Great Smoky Mountains National Park, 1987.

Effect on Experience	N	% of Backpackers Who Expressed Response
Number of encounters added greatly to experience	21	11.5
Number of encounters added a little to experience	55	30.2
Number of encounters neither added or detracted from experience	47	25.8
Number of encounters detracted a little from experience	47	25.8
Number of encounters detracted greatly from experience	12	6.6

Table 31. Effect of size of parties encountered on backcountry backpackers' recreational experiences in the Great Smoky Mountains National Park, 1987.

Effect on Experience	N	% of Backpackers Who Expressed Response
Party size added greatly to experience	5	2.7
Party size added a little to experience	22	12.1
Party size neither added or detracted from experience	114	62.6
Party size detracted a little from experience	27	14.8
Party size detracted greatly from experience	14	7.7

Table 32. Maximum size and number of parties that backcountry backpackers could tolerate before solitude reaches unsatisfactory levels, Great Smoky Mountains National Park, 1987.

Location of Encounter	Number of Parties	Size of Parties
Trailhead	3.77	3.95
Campsite	2.73	3.24
Along Trail	5.53	3.95

(3-4 people) did not vary greatly on the basis of location of encounters (Table 32). The ideal size of groups encountered was 2.63 people.

Discussion

As suggested by previous studies, visitor responses to questions about the maximum number of encounters which could be tolerated before solitude reached unsatisfactory levels frequently did not coincide with their reaction to the actual number of encounters. Overall, 81% of the backpackers in the study encountered more parties than they stated they could tolerate in at least one of three encounter sites (trailhead, campsite, or trail). However, only 32% of the backpackers stated that the number of encounters detracted from the experience.

Despite this discrepancy, there was a relationship between the belief that the number of actual encounters detracted from the recreational experience and encountering more parties than the level considered to be acceptable. Ninety-three percent of those who stated that the number of encounters detracted from the experience exceeded their limits for the acceptable number of encounters (Table 33). These individuals also tended to encounter more parties than expected. Sixty-two percent of the backpackers in this group met more parties than expected while only 9% encountered fewer parties than expected.

These results suggest that there is a subgroup of wilderness backpackers for whom a lack of encounters is a very important part of the privacy/solitude experience, and that these individuals are able to provide a realistic estimate of an acceptable number of encounters. If this interpretation is correct, individuals in this subgroup would be expected to assign the Isolation dimension of privacy/solitude greater importance than other users. As Table 34 indicates this is the case.

Table 33. Distribution of backcountry backpackers based on how the number of encounters affected the recreational experience in the Great Smoky Mountains National Park, 1987.

Actual Encounters vs. Acceptable Number of Encounters	<u>Effect of Number of Encounters</u>		
	<u>Added to experience</u> N	<u>No effect on experience</u> N	<u>Detracted from experience</u> N
Actual exceeded acceptable	55	33	53
Actual did not exceed acceptable	18	11	4

$$\chi^2 = 7.876, p = 0.019.$$

Table 34. Difference in mean importance rating of the isolation dimension of wilderness solitude between backpackers who encountered more parties than the level they stated was acceptable and who said the number of encounters detracted from the experience (group 1) and other backpackers (group 2).

	N	Mean importance rating of Isolation
Group 1	53	2.69 ¹
		p = 0.0001 ²
Group 2	131	3.34

¹ Mean based on following scale: 1 = extremely important to 7 = not at all important.

² Probability from t test for samples with unequal variance.

CHAPTER VIII

COPING BEHAVIORS

Introduction

Since crowding is commonly defined as the phenomenon of goal interference due to the presence of too many others, people can choose to avoid others in order to preserve or enhance the probability of experiencing solitude. Saegert (1975) suggests that the negative effects of crowding (lack of privacy) may be caused by the increase in social stimuli with which a person must cope, necessarily diverting energy and attention from relevant environmental (wilderness, in our case) cues. Thus, wilderness users seeking privacy/solitude may engage in certain social and physical avoidance behaviors as coping mechanisms for lessening their chances of interacting with other wilderness users, both inter and intra party individuals.

There are a number of coping behaviors that wilderness users may employ to decrease their chances of interacting, both socially and physically, with other wilderness users. The purposes of this section of the study were: (1) to analyze the degree to which wilderness backpackers use a number of common social and physical avoidance behaviors, and (2) to examine for a relationship between the dimensions of wilderness privacy described in chapter V and the types of privacy coping behaviors used by wilderness visitors. For example, do wilderness users that define Intimacy as an important dimension of privacy employ certain coping behaviors more often than those who value Isolation as a dimension of wilderness privacy?

Methods

Section IV of the questionnaire (Appendix B) contained 12 items that described 6 social and 6 physical avoidance behaviors that serve as coping mechanisms for reducing interaction with other wilderness users. Respondents were asked to indicate how frequently they used the 12 behaviors to cope with visitor encounters in the backcountry. A 5-point response scale was offered:

- Almost always
- Usually
- Sometimes
- Seldom
- Never

Data analyses consisted of computing frequency (%) and mean ($\bar{X}$) responses for the 12 coping behaviors, and analysis of variance for investigating the relationship between different dimensions of privacy and the coping behaviors. To conduct the analysis of variance, the 5-category response scale was collapsed to a 3-category scale, where "Almost always" and "usually" were combined into one response, and "Seldom" and "Never" were combined into another. This was done for easier, and hopefully more meaningful, interpretation of the analysis. Duncan's Multiple Range Test was used to separate mean differences where significance occurred ($p \leq 0.05$).

Results

Percent Occurrence Of Coping Behaviors

Table 35 shows the degree of occurrence or usage of the various coping behaviors by respondents. The findings will be reported for social coping strategies, then for physical strategies.

Backpackers of Great Smoky Mountains National Park shelters are quite social in terms of greeting and talking with other backpackers. Nearly 80% of respondents reported that they seldom or never "purposely avoid talking

Table 35. Coping behaviors used by Great Smoky Mountains National Park backpackers when encountering visitors in the backcountry, 1987.

Coping Behavior	Frequency Of Behavior (%)					x ¹
	Almost Always	Usually	Sometimes	Seldom	Never	
Social Coping:						
purposely avoid talking to back- packers outside your own party in camp.	1	4	16	37	42	4.2
purposely avoid talking to back- packers outside your own party on the trail.	1	3	10	43	43	4.2
initiate greetings (i.e. Hi, Hello) to other parties.	51	40	7	2	0	1.6
initiate social interaction with backpackers of your own party.	48	35	15	1	1	1.7
initiate social interaction with backpackers in other parties.	8	22	43	24	3	2.9
exchange ideas about equipment and trip plans with other backpackers outside your party.	19	32	35	13	1	2.5
Physical Coping:						
camp out of sight of other groups whenever possible.	21	21	25	15	18	2.9
purposely avoid using trails which are known to have a popular vista or other popular attractions.	8	11	24	36	21	3.5
purposely use trails which are more difficult because there may be fewer parties encountered.	6	11	30	33	20	3.5
purposely use a trail that has not been maintained well because there may be fewer parties encountered.	4	9	24	33	30	3.8

Table 35 (cont.). Coping behaviors used by Great Smoky Mountains National Park backpackers when encountering visitors in the backcountry, 1987.

Coping Behavior	Frequency of Behavior					x ¹
	Almost Always	Usually	Sometimes	Seldom	Never	
plan your trip for a particular time of day during which you feel there may be fewer encounters.	8	8	15	36	33	3.8
avoid using the park during peak times such as summer, weekends, and national holidays.	7	19	20	28	26	3.5

¹ Means based on the following scale: 1=Almost Always, 2=Usually, 3=Sometimes, 4=Seldom, 5=Never.

to other backpackers outside their own party." This behavior occurred about equally whether respondents were in camp or on the trail. In fact, 42% and 43% indicated that they never purposely avoid talking to other party members when in camp or on the trail, respectively. Likewise, respondents are prone to initiate greetings to other backpacking parties. Over 90% reported that they almost always or usually initiate greetings to others.

Respondents also indicate a high degree of initiating social interaction with backpackers of their own party. However, they are less likely to do so when encountering backpackers outside their party. While 83% said they almost always or usually initiate social interaction within the party, only 30% do so outside the party. Nearly a quarter of respondents indicated that they seldom engage in social interaction outside their own party. More specifically, when asked if they "exchange ideas about equipment and trip plans with other backpackers outside your party," 51% said they almost always to usually do.

Concerning physical means of avoiding visitor encounters, backpackers of the Great Smokies are somewhat more likely to employ these coping strategies. The most common strategy used is to camp out of sight of other groups whenever possible. Forty-two percent almost always or usually do this, however, 33% seldom or never do. When it comes to purposely avoiding the use of popular trails and to using trails that may contain fewer users due to the difficulty or lack of maintenance of trails, over one-half to two-thirds of visitors seldom to never use these strategies. Surprisingly, less than 20% of hikers said they avoid the use of popular trails and trail attractions.

To avoid visitor encounters, backpackers might also plan to start their backpacking trip at particular times of the day or to avoid use of

the Park during peak use times such as summer, weekends, and holidays. However, 69% of respondents seldom to never use the first coping strategy, and 54% seldom to never use the second.

Relationship Of Coping Behaviors To Privacy Dimensions

The following analysis addresses the question, "do backpackers who almost always or usually engage in a coping behavior to avoid others tend to rate the dimensions of privacy more importantly than those who seldom or never employ the behaviors?" Also examined is the question "are certain coping strategies related to certain dimensions more often than others?"

Table 36 indicates the results of the analysis. Five of the coping behaviors did not reveal significant differences between how often a backpacker would use those particular behaviors and how important they rated the privacy dimensions. These five coping behaviors are not shown in Table 36, but include: purposely avoid talking to backpackers outside your own party in camp; purposely avoid talking to backpackers outside your own party on the trail; initiate greetings to other parties; avoid using the Park during peak times such as summer, weekend days, and national holidays; and exchange ideas about equipment and trip plans with other backpackers outside your party. Of the remaining seven behaviors that were significantly related to some of the six dimensions, two were social coping behaviors, while five were physical.

Examination of the data in Table 36 reveals a common pattern where the more often a person engaged in a coping behavior (almost always to usually), the more importantly they rated various dimensions of privacy. For example, where significant differences occur, it is commonly between those who almost always-usually use the coping behavior and those who

Table 36. The relationship of participation in coping behaviors to avoid others with corresponding importance for dimensions of wilderness privacy, Great Smoky Mountains National Park, 1987.

Coping Behavior ¹		Privacy Dimension					
		Individual Cognitive Freedom	Nature	Intimacy	Social Cognitive Freedom	Individualism	Isolation
<u>Social Coping</u>							
initiate social interaction in your own party.	A-U ²	2.05 ³	2.84b ⁴	1.60b	2.43b	3.59	3.12
	S	1.98	2.81b	1.66b	2.29b	3.59	3.12
	S-N	2.81	4.00a	2.56a	4.00a	4.00	3.67
initiate social interaction with other parties.	A-U	2.03	3.16a	1.68	2.45	3.67	3.64a
	S	2.05	2.79ab	1.59	2.44	3.48	2.99b
	S-N	2.11	2.64b	1.65	2.43	3.70	2.80b
<u>Physical Coping</u>							
camp out of sight of other groups	A-U	2.05	2.57b	1.48b	2.26	3.49	2.85b
	S	2.06	2.87ab	1.72b	2.53	3.63	2.87b
	S-N	2.07	3.23a	1.75a	2.62	3.70	3.68a
purposely use trails which are more difficult	A-U	1.85b	2.81ab	1.40b	2.45a	3.33b	3.16a
	S	1.83b	2.54b	1.46b	1.95b	3.05b	2.62b
	S-N	2.27a	3.07a	1.82a	2.73a	4.01a	3.43a
purposely use a trail that has not been well maintained	A-U	1.81b	2.65ab	1.38b	2.22ab	3.27b	2.71b
	S	1.75b	2.49b	1.46ab	1.93b	2.49b	2.67b
	S-N	2.23a	3.04a	1.75a	2.68a	3.89a	3.39a
purposely avoid using trails with popular vistas and destinations	A-U	1.81b	2.75	1.36b	2.16b	3.07b	2.76b
	S	1.91ab	2.64	1.56ab	2.16b	3.49ab	2.80b
	S-N	2.20a	2.99	1.76a	2.66a	3.82a	3.41a
plan your trip for a particular time of day for fewer encounters	A-U	1.74	2.53ab	1.41b	2.05b	3.12b	2.59b
	S	1.93	2.43b	1.37b	1.98b	3.15b	2.74b
	S-N	2.16	3.02a	1.74a	2.63a	3.80a	3.34a

¹ Coping behaviors have been abbreviated. See Table 35 for full description.

² Coping behavior response categories were collapsed, where A-U = almost always-usually, S = Sometimes, S-U = seldom-never.

³ Means for privacy dimensions, where 1 = extremely important, 4 = neutral, 7 = not at all important.

⁴ Means with subscripts are significantly different; separated by Duncan's Multiple Range Test.

seldom-never do. Also, those who "sometimes" use the strategies are much more similar to the almost always-usually respondents than the seldom-never respondents.

Concerning the social coping behaviors, backpackers who almost always-usually "initiate social interaction in their own party" feel more strongly about the privacy dimensions of Nature, Intimacy, and Social Cognitive Freedom. On the other hand, those who seldom-never "initiate social interaction with other parties" feel more strongly about the Nature and Isolation dimensions than those who almost always-usually engage in the strategy. Thus, the data suggests that those most likely to initiate social interaction within their own party are more likely to value the social oriented dimensions of privacy (i.e. intimacy and social cognitive freedom), while those individuals most likely to initiate social interaction with outside parties are less likely to value the Isolation dimension of privacy. These findings seem logical.

There is a much more frequent, significant relationship between physical coping strategies and privacy than found for social coping behaviors. Five of the six physical coping strategies showed significant relationships with the majority of the privacy dimensions. In fact, two of coping behaviors are significantly related to all six of the dimensions, and two are related to five of the dimensions.

Those backpackers who almost always to usually "camp out of sight of other parties" value the privacy dimensions of Nature, Intimacy, and Isolation more than those who seldom-never practice the behavior. As discussed in chapter V, higher importance ratings for both the Intimacy and Isolation dimensions need not be in conflict, for isolation can mean inter-group separation or intimate group isolation.

Physical coping behaviors involving the use of difficult and unmaintained trails to reduce visitor encounters were significantly related to all six of the privacy dimensions. In almost all cases, respondents engaging almost always-usually in these behaviors rated the privacy dimensions more important than those using the strategies seldom or never. The avoidance of trails with popular vistas and destinations was significantly related to all the dimensions of privacy, except Nature. The strategy of "planning your trip for a particular time of day for fewer encounters" was also related to five of the six dimensions, the exception being Individual Cognitive Freedom. Again, the pattern of those most often participating in the coping behaviors also finding the privacy dimensions more important, was upheld.

Discussion

Too much social communication and interaction with other backpackers does not seem to be much of a concern with wilderness users of shelters in Great Smoky Mountains National Park. Less than 5% of the respondents purposely avoid greeting and talking to other backpackers on a regular basis. This finding correlates well with earlier work by Lee (1977) where he found that people, as social organisms, can symbolically interact with others with little goal interference occurring. Once within certain social distances or boundaries of others, we commonly communicate with others as an automatic and symbolic interaction of courtesy. As a consequence, we found our respondents seldom to never employing these coping behaviors. However, as a means of coping with visitor encounters, respondents are unlikely to initiate social interactions with backpackers of other parties. Over a quarter of respondents seldom or never initiate social interactions outside their own party, and another 43% only engage in this behavior part

of the time. On the other hand, backpackers commonly initiate social interactions within their own party. These findings agree with earlier observational work by Hendee et al. (1977) and Heberlein and Dunwiddie (1979), where wilderness fishermen and campers demonstrated avoidance behaviors with individuals from other parties.

Before individuals are required to socially communicate or interact with others, they must first come into contact with others. Thus, physical coping strategies are primary avoidance behaviors, where the social strategies are secondary in nature. To avoid initial encounters with other campers, respondents are most likely to "camp out of sight of other groups whenever possible." However, only 9% more of respondents engage in this coping behavior on a regular basis as compared to those who seldom-never do (42% vs 33%, respectively). To a much lesser extent, respondents also used trail and trip planning behaviors to reduce the chance of visitor encounters. However, less than one in five users commonly employed these coping behaviors to avoid encounters. This seems rather low, but it agrees with the finding that nearly 75% of respondents felt they had experienced "about the right amount" of solitude on the trip and the fact that users encounter about the same number of parties that they expected to encounter ($\bar{x} = 8.8$ parties).

The physical coping behaviors were more strongly related than the social behaviors to the importance of the wilderness privacy dimensions. If privacy, in its various forms, is one of the major goals of wilderness use, then physical coping behaviors should be the primary means of reducing interference with meeting this goal. And indeed, the more importantly respondents rated the privacy dimensions, the more likely they were to engage in physical coping behaviors on a regular basis (i.e. almost always-

usually). So, even though coping/avoidance behaviors were not commonly used by the majority of our respondents, those that did commonly use them were also those backpackers that valued wilderness privacy the most. Thus, coping behaviors are serving those wilderness users that seem to have the greatest need to prevent interference with the goal of wilderness privacy, especially the privacy dimensions of Nature, Intimacy, and Isolation.

CHAPTER IX

CONCLUSIONS

Dimensions of Privacy/Solitude

The primary purpose of this study was to field test the wilderness privacy/solitude scale first developed with classroom college students in 1981. Field testing of the scale revealed four major findings:

- (1) Wilderness "solitude" is a much more complex psychological concept than "being alone." Wilderness privacy and the many realms of freedom of choice which humans seek in remote natural environments provides a better concept of wilderness "solitude" than "being alone." Wilderness solitude is not so much individual isolation as it is "a form of privacy in a specific environmental setting where individuals experience an acceptable and preferred degree of control and choice over the type and amount of information they must process." The field test verified this initial conclusion of the 1981 study.
- (2) The field test produced two new dimensions beyond the four first identified. Cognitive freedom, in terms of freedom of choice over one's actions, use of time, attention and thought processes, and social roles, is an important aspect of wilderness privacy at both the individual level and when one is interacting with a "small group" of selected "others." The Cognitive Freedom domain of wilderness privacy can operate at the individual or at a socially controlled level.

The second new dimension involved isolation. However, isolation goes beyond being by one's self. It can involve isolation that results from being with a small intimate group that is isolated from all other groups. Shared separation might

be a better definition of the isolation construct in wilderness.

- (3) In general, field testing of the wilderness privacy scale produced similar dimensions of privacy as found in the initial laboratory analysis. The importance of wilderness as a place where people can control cognitive freedom and benefit from a state of tranquility and peacefulness were upheld by the field results. Strength of the dimensions, in terms of importance, was also similar between the two studies. Rank order of importance was the same for the common dimensions in the studies. Thus, the wilderness privacy scale shows promise for further field analysis.
- (4) Adoption of the privacy scale was further encouraged by the fact that all 20 of the items factored in the field test. Even though the field respondents were more diverse in age, education, occupation, etc. than the college students in the development study, the field respondents reacted to the scale items with much more consistency than did the students. The factoring of all 20 items and the higher factor alpha values for field respondents indicated that they found considerable internal consistency among the items as a measure of wilderness privacy and its many dimensions.

Further testing of the wilderness privacy scale, particularly with remote campsite users will allow for exploring other realms of privacy and refinement of the existing scale. Testing of the scale in wilderness settings that vary in degree of remoteness and naturalness should also be revealing as to the many "solitudes" that wilderness users seek, and the importance assigned to them under differing conditions. Replication of the

study among field respondents with similar background and other sample characteristics is also necessary to control sources of variation and allow for validating the privacy constructs under various conditions.

Past Experience

The level of previous backpacking experience did not affect the order in which respondents rated the six dimensions of wilderness privacy. All three experience groups rated Natural Environment as the most important dimension and Individualism as the least important. This similarity is consistent with the concept of recreational specialization if wilderness backpacking is viewed as a specialized stage of a recreational camping continuum. Solitude is thought to be a distinguishing characteristic of the wilderness experience. Therefore, the concept of recreational specialization suggests that individuals engaged in this activity would have similar attitudes toward this attribute.

The importance rating that respondents assigned to the Natural Environment dimension was related to the amount of previous experience. Highly experienced users rated this dimension as more important than moderately experienced users. One possible interpretation of this finding is that increasing experience leads to a more intense focus on the elements of the environment which are associated with wilderness privacy/solitude. If this interpretation is correct, then level of previous experience is an important consideration when seeking user input about the appropriate standards for wilderness areas. This topic should be pursued in future research. Additionally, future efforts should focus on refining methods to group users by level of past experience.

Visitor Encounters

In general, visitor responses to the questions about the maximum number of encounters which could be tolerated before solitude reached unacceptable levels were not consistent with their reaction to the actual number of encounters. In most cases where the hypothetically acceptable number of encounters was exceeded, respondents indicated that the number of encounters did not detract from the experience. This indicates that wilderness solitude means more than just being alone. This interpretation is supported by the wilderness privacy scale which indicated six privacy/solitude dimensions. As a result, managers need to develop measures other than number of encounters in order to evaluate a wilderness area's ability to provide wilderness solitude.

However, there was a subgroup of backpackers who encountered more parties than the level they stated was hypothetically acceptable and who also indicated that the number of encounters detracted from the experience. These individuals differed from other respondents by assigning the Isolation dimension of privacy a higher importance rating than other respondents did. This finding has two implications. First, there is a segment of users to whom a lack of encounters is a very important part of the privacy/solitude experience and these individuals are able to provide a more accurate estimate of the acceptable number of encounters than other recreationists. Second, the wilderness privacy scale can be used to identify these individuals and therefore can assist managers in setting appropriate evaluative standards for different subgroups of wilderness backpackers.

Coping Behaviors

Social coping behaviors were not frequently used by respondents.

Physical coping behaviors were used more frequently, indicating that physical coping strategies are the primary means of limiting interactions with other wilderness users.

The privacy scale indicated differences between those who regularly employed these behaviors and those who infrequently exhibited these behaviors. Respondents who usually-always employ social coping behaviors felt more strongly about Nature, Intimacy, and Social Cognitive Freedom. In most cases, those who regularly employ physical coping strategies assigned greater importance to the dimensions of wilderness privacy. The results indicate, therefore, that coping behaviors are employed by those wilderness recreationists with the greatest need to prevent interference with wilderness privacy.

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APPENDICES

APPENDIX A

On-site Contact Form

GREAT SMOKIES WILDERNESS SOLITUDE STUDY

1. What day of week did you start
your backpacking trip?
M T W TH F S SU
2. Including yourself, how many people
are in your backpacking party?
_____ PEOPLE
3. Thus far, how much solitude has
this trip provided for you?
(Please check only one)
_____ NOT ENOUGH
_____ ABOUT THE RIGHT AMOUNT
_____ TOO MUCH
4. About how many parties have you
encountered on this backpacking
trip:
ON THE TRAIL? _____
AT THE CAMPSITE LOCATION? _____
5. About how many parties did you
expect to encounter on this
_____ PARTIES
6. Of the parties you have en-
countered, how many of them
were over 8 people in size?
_____ PARTIES
- We would like your name and
address in order to mail you
a short survey. PLEASE PRINT.

NAME _____
ADDRESS _____
CITY _____ STATE _____
ZIP CODE _____

THANKS FOR YOUR HELP AND
COOPERATION!

The University of Tennessee

APPENDIX B

Mail Questionnaire

GENERAL INFORMATION. We would appreciate a few minutes of your time to answer this survey. By sharing your views about your backpacking experience you can help managers do a better job of providing these experiences in the future.

SECTION I. TRIP CHARACTERISTICS

For this section of the survey, please base your responses on what you, yourself, think of as an average backpacking trip. If the trip during which I contacted you was your first backpacking experience, please base your responses on that trip.

1. How many people are usually in your backpacking party?

%	<u>4.9</u> 1	<u>24.5</u> 4	<u>3.8</u> 10+
	<u>35.9</u> 2	<u>13.6</u> 5-6	
	<u>12.5</u> 3	<u>4.9</u> 7-9	

2. What type of party do you usually backpack with?

%	<u>5.4</u> alone
	<u>24.5</u> with a friend
	<u>25.5</u> with friends
	<u>10.3</u> with family
	<u>21.7</u> with both family and friends
	<u>12.5</u> with organized clubs (i.e. Scouts, church groups, outdoor clubs)

3. What is the average length of backpacking trips in which you participate?

MEAN 24.0 miles and 3.2 number of days

4. What season do you most frequently go backpacking? (Please check one)

%	<u>68.5</u> summer (Jun - Aug)
	<u>17.9</u> fall (Sep - Nov)
	<u>8.2</u> winter (Dec - Feb)
	<u>5.4</u> spring (Mar - May)

5. Does your backpacking trip normally start on a weekday or a weekend day?

%	<u>32.8</u> weekday (Mon - Thurs)
	<u>67.2</u> weekend day (Fri - Sun)

6. How far do you generally hike before setting up camp for the first night of the backpacking trip?

MEAN 6.6 miles

SECTION II. YOUR BACKPACKING EXPERIENCE

GENERAL BACKPACKING EXPERIENCE. For questions 1 through 4, please continue basing your answers on your backpacking experiences in general.

1. Is this your first backpacking trip ever?

% 15.8 Yes 84.2 No

↓
If yes, please skip to question 9 of this section.

2. About how many (number of) different, individual years of backpacking experience have you had? (For example, if you backpacked in 1970, 1981, and last month, your reply would be 3 years.)

MEAN 6.78 years

3. About how many backpacking trips (average) do you take per year?

MEAN 3.94 trips per year on average

4. About how many of these are made on average in the:

MEAN 2.16 summer (Jun - Aug)?
2.07 fall (Sep - Nov)?
1.88 winter (Dec - Feb)?
1.75 spring (Mar - May)?

BACKPACKING EXPERIENCE IN THE GREAT SMOKY MOUNTAINS NATIONAL PARK. For questions 5 through 10, please base your responses only on backpacking experiences that you, yourself, have had in the Great Smoky Mountains National Park.

5. Is this your first backpacking trip in the GSMNP?

% 65 Yes 35 No

↓
If yes, please skip to question 9 of this section.

6. About how many years have you been backpacking in the Smokies?

MEAN 5.39 years

7. On the average, how many backpacking trips to the Smokies do you make per year?

MEAN 3.07 trips per year

8. How many of these are made in the:

MEAN 1.84 summer (Jun - Aug)?
2.10 fall (Sep - Nov)?
1.87 winter (Dec - Feb)?
1.81 spring (Mar - May)?

9. As an outdoor recreation activity offered by the park, how important is backpacking to you compared to other outdoor activities offered by the park?

%	<u>0.0</u> Not at all important	<u>35.4</u> Very important
	<u>0.6</u> Slightly important	<u>56.8</u> Extremely important
	<u>7.2</u> Moderately important	

10. On the particular trip during which I contacted you, were you the group leader? (If there was no apparent leader, did you obtain the permit?)

% 58.7 Yes 41.3 No

SECTION III. VISITOR ENCOUNTERS

Information about visitor encounters you may have experienced would be helpful to managers and could help make your future backpacking trips in the Smokies more enjoyable. Please limit your responses to questions 1 through 7 to the backpacking trip during which I contacted you, ignoring any other trips.

1. About how many parties (of any user type) do you estimate that you encountered while on the trail itself?

MEAN 10.17 number of parties

2. Estimate the number of parties you encountered at:

MEAN	<u>2.66</u> the trailhead	<u>1.65</u> junctions in the trail
	<u>4.28</u> the campsite	<u>1.47</u> on the 1st mile of trail
		<u>2.68</u> on the 1st 5 - 10 mi. of trail

3. Did you expect to encounter:

% 27.9 more parties than you encountered?
 40.4 about the same number of parties as you encountered?
 31.7 fewer parties than you encountered?

4. Did you feel the number of parties that you encountered:

% 11.5 Added greatly to your experience?
 30.2 Added a little to your experience?
 25.8 Neither added or detracted from your experience?
 25.8 Detracted a little from your experience?
 6.6 Detracted greatly from your experience?

5. What do you estimate was the average size of the parties you encountered?

MEAN 3.03 number of individuals

6. Did you feel the size of the parties that you encountered:

% 2.7 Added greatly to your experience?
 12.1 Added a little to your experience?
 62.6 Neither added or detracted from your experience?
 14.8 Detracted a little from your experience?
 7.7 Detracted greatly from your experience?

7. Were all the people you encountered backpackers?

% 12.0 Yes 88.0 No

Of the people you saw who were not
backpackers, about how many were:

MEAN 8.57 dayhikers
 2.38 fishermen
 3.85 horseback riders
 2.62 employees of the park
 10.44 others (please list)

8. In your opinion, about what is the maximum number of parties and size of party that you could tolerate before solitude reaches unsatisfactory levels?

	<u>Number of parties</u>	<u>Size of parties</u>
MEAN At trailhead?	<u>3.77</u>	<u>3.95</u>
At campsite?	<u>2.73</u>	<u>3.24</u>
Along trail?	<u>5.53</u>	<u>3.95</u>

9. What would you consider the ideal number of parties and size of party encountered on a backpacking trip?

MEAN 4.07 number of parties and 2.63 size of party

SECTION IV. COPING BEHAVIORS

Many backpackers use various methods of controlling different situations which arise while they are in the backcountry. Would you please rate how frequently you use the following ones to cope with visitor encounters in the backcountry.

When backpacking, to what degree do you:

	Almost Always	Usually	Sometimes	Seldom	Never	%
a) purposely avoid talking to backpackers outside your own party in camp?	1	4	16	37	4	
b) purposely avoid talking to backpackers outside your own party on the trail?	1	3	10	43	43	
c) camp out of sight of other groups whenever possible?	21	21	25	15	18	
d) initiate greetings (i.e. Hi, Hello) to other parties?	50	40	7	2	1	
e) exchange ideas about equipment and trip plans with other backpackers outside your party?	19	32	35	13	1	
f) initiate social interaction with backpackers of your <u>own</u> party?	48	35	15	1	1	
g) initiate social interaction with backpackers in <u>other</u> parties?	8	22	43	24	3	

	Almost Always	Usually	Sometimes	Seldom	Never	%
h) plan your trip for a particular time of day during which you feel there may be fewer encounters?	8	8	15	36	33	
i) purposely avoid using trails which are known to have a popular vista or other popular destination?	8	11	24	36	21	
j) avoid using the park during peak times such as summer, weekend days, and national holidays?	7	19	20	28	26	
k) purposely use trails which are more difficult because there may be fewer parties encountered?	6	11	30	33	20	
l) purposely use a trail that has not been maintained well because there may be fewer parties encountered?	4	9	24	33	30	

SECTION V. IMPORTANCE OF SOLITUDE

For this section of the survey, will you please check each item according to how important it is to you, yourself, in regards to solitude?

	<i>Extremely important</i>	<i>Very important</i>	<i>Somewhat important</i>	<i>Neutral</i>	<i>Somewhat unimportant</i>	<i>Unimportant</i>	<i>Not at all important</i>	%
How important is solitude to your wilderness experience?	13	40	37	8	1	1	1	

How important for you are the following aspects of solitude:

-an isolated experience, by yourself?	8	16	34	13	8	9	10	
-a small, intimate group experience, isolated from all other groups?	11	28	39	13	5	2	2	
-a small, intimate experience with one other person?	12	27	36	13	6	3	3	
-freedom to control your thoughts, regardless of being with a small group or by myself?	26	39	17	14	2	1	2	
-an opportunity to socialize with friends or family without being interrupted by others?	7	33	32	16	4	5	3	
-freedom to choose when and to what extent you have to speak and interact with others?	20	27	27	16	4	4	2	
-being yourself, free from the expectations of others?	31	32	22	9	2	2	2	
-being able to limit your attention to only a few chosen people?	13	26	30	22	2	3	4	
-privacy from most people, yet a personal relationship with my friends or family?	20	32	29	11	3	3	2	

	Extremely important	Very important	Somewhat important	Neutral	Somewhat unimportant	Unimportant	Not at all important
	9	16	23	30	4	11	8
-an environment where I can assume an anonymous identity?							
-being in a completely natural environment?	44	38	12	3	0	2	0
-free from daily body maintenance (i.e. bathing, shaving) if one wishes?	8	12	16	26	8	16	14
-being relieved from rules and constraints of society?	21	19	22	15	6	14	4
-free from observation by all other people?	10	19	32	21	8	9	2
-the tranquility and peacefulness of the remote environment?	65	28	4	1	1	1	0
-freedom of choice as to actions and use of time?	43	31	19	4	1	2	2
-free to limit your attention to whatever you choose?	40	28	19	8	2	2	1
-an environment free of man-made intrusions?	51	28	14	3	2	1	2
-control over the pressures and tensions of everyday life?	41	32	20	6	0	1	0
-an environment free of man-made noises?	68	23	6	2	0	2	0
-a small, intimate group relationship which permits individual isolation when one desires it?	27	38	22	9	2	3	0

SECTION VI. VISITOR INFORMATION

In this final section we would like to ask some questions about your background which will help us compare your answers to those of other people. This information is important to the success of this study and aids in making predictions about backpacking use in the future. All of the information is STRICTLY CONFIDENTIAL and WILL NOT be associated with you as an individual.

1. Your present age: ^{mean} 33.3 Years 2. Your sex: 83.2% Male 16.8% Female

3. What is the highest level of education you have completed so far?
(Circle one number)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18+	MEAN
Elementary								High School				After High School						15.6	

4. What is your occupation? (Be as clear as possible—tell what kind of work you do, not for whom you work. If student, housewife, unemployed, or retired; please say so)

-
5. Check the one answer below that best describes the size of the area where you live now?

14.1% Large metropolitan area; over 1,000,000 people
32.1% Metropolitan area; 100,000 to 1,000,000 people
31.0% City; 10,000 to 100,000 people
10.9% Small town; under 10,000 people
7.1% Rural; non-farm
4.8% Rural; farm

6. Check the category that includes your 1986 total household income before taxes. If student, give parents approximate income.

<u>6.6%</u> Under \$10,000	<u>13.8%</u> \$40,000 to \$49,999
<u>12.7%</u> \$10,000 to \$19,999	<u>22.1%</u> \$50,000 to \$74,999
<u>17.7%</u> \$20,000 to \$29,999	<u>5.0%</u> \$75,000 to \$99,999
<u>16.6%</u> \$30,000 to \$39,999	<u>5.5%</u> \$100,000 and above